

IMPORTANT:

Please refer to the [USC Center for Excellence in Teaching](#) for current best practices in syllabus and course design. This document is intended to be a customizable template that primarily includes the technical elements required for the Curriculum Office to forward your proposal to the UCOC.

**ITP 315: Game Character Animation****Units: 4****Fall 2020****Lecture: Monday: 6:00 - 7:50 pm****Lab: Wednesday: 6:00 - 7:50 pm****Location:** KAL 107**Instructor:** St.John Colón**Office:** TBD**Office Hours:** TBD, or by appointment**Contact Info:** scolon@usc.edu**Teaching Assistant:** TBD**Office:** TBD**Office Hours:** Before, after, and during class**Contact Info:** TBD**IT Help:**Viterbi IT: <https://vsoeweb.vsoe.usc.edu/helpdeskpro/>USC ITS: <https://itservices.usc.edu/>**Hours of Service:**

Phone: 24 hours per day, 7 days per week

Email: M-F, 8am – 6pm

Contact Info: 213.740.5555

Course Description

Explore the performance methodologies of 3D game character motion and animation technologies and their application in modern cinematic, game, and creative fields. Gain hands-on experience animating a 3d character from sketches through production, setting up unique and optimized technical processes for your unique character.

Learning Objectives

Learn 3d game character animation and its specific needs unique to the 3d game environment: Visual communication to the player through animation as well as a solid and strong technical setup. Overview of the needs and requirements for a unique character motion, as well as an animation pipeline that is malleable under the stress of production.

Prerequisite(s): ITP 215

Recommended Preparation: Experience with 2d graphics, 3d modeling, or CAD useful but not required.

Course Notes

There is no text for the course, however each student is expected to make use of the many resources available online, including Autodesk learning documentation, Linda.com resources, and course materials on Blackboard. Course materials, assignment submissions, lecture slides, and updates will be posted on Blackboard. This course is for a letter grade. The grading scale for the course is listed below. Students should plan to bring note taking materials, sketchbooks, or other materials for brainstorming, note taking, sketching, and design work.

Technological Proficiency and Hardware/Software

- Autodesk Maya 2019
- Adobe Photoshop

Required Readings and Supplementary Materials

Materials available on Blackboard.usc.edu

Description and Assessment of Assignments

Projects will be assigned and submitted via Blackboard. Many assignments will have a deliverable set of 2d and 3d assets but should be supported with the supplementary files and assets required in the assignment details.

Grading Breakdown

All assignments and grading criteria will be posted and submitted via Blackboard.usc.edu.

Assignment	Points	% of Grade
Animation project 1	60	30
Animation project 2	60	30
Animation project 3	60	30
Reading quizzes, Participation	20	10
TOTAL	200	100

Attendance/Tardiness Policy:

Students should be in class every day and for every lab session. If you are not able to attend, you must contact your advisor and instructor. Unexcused absences will negatively affect your grade. Students must arrive to class promptly. Points will be deducted for tardiness. Repeat tardiness will increase the points deduction per instance of tardiness. Additionally, any student who does not show up within 15 minutes of the start of either the morning and afternoon sessions will be reported to the summer program advisor. Please set an extra alarm and show up on time!

Grading Scale (Example)

Course final grades will be determined using the following scale

A	95-100
A-	90-94
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	59 and below

Assignment Rubrics

Assignments and Rubrics will be available on Blackboard.usc.edu

Assignment Submission Policy

All assignments, submission rules, and details will be published on Blackboard.usc.edu.

Grading Timeline

Assignments will be graded as quickly and efficiently as possible. Due to the five day per week course schedule, grades may not be posted until the weekend following each week.

Additional Policies

Add any additional policies that students should be aware of: late assignments, missed classes, attendance expectations, use of technology in the classroom, etc.

Course Schedule: A Weekly Breakdown

Below is the detailed course calendar that includes a list of deliverables (homework assignments, examinations, etc.) broken down on a weekly basis. It includes:

- Subject matter, topic and activity
- Required preparatory reading or tasks (e.g., viewing videos)
- Deliverables and when each deliverable is due.

	Topics/Daily Activities	Readings/Preparation	Deliverables
Week 1	Introduction to course Expectations of class: USC code of conduct USC Blackboard, USC Lynda.com Maya and web support resources: Online help, class webpage, tutorials, etc.	Animation Project One BIPED SETUP and BASICS (Week 1 of 4): Technical: Animating a rig Setting keyframes Toolsets: 'Pants' character Movelister	Maya: Download and animate base 'Pants' character and get used to using IK/Fk switching Animate first-pass walk
Week 2	Character Animation Setup (Graph Editor)	Animation Project One (Week 2 of 4): Save First-pass walk for comparison with later work Technical: Smoothing tangencies Toolsets: Setting up image plane with movie for reference.	Maya: Continue animating character Walk and start animating Run using intermediary poses between keyframes (just hips)
Week 3	Animating in orthographic views	Animation Project One (Week 3 of 4): Technical: Animating from the inside-out (Hips, chest).	Maya: Animating from orthographic Using 'pants' character, animate only the hips in figure-eight Forward/back in side view Figure eight in top view
Week 4	Offsetting keyframes	Animation Project One (Week 4 of 4): Research: Why offsetting frames is more natural in motion Beware Twinning!	Maya : Finish up walk and run with smoothed keyframes and hip/legs offset. Upload your final work to Blackboard.

		Technical: How to offset frames in graph editor and keep motion.	
Week 5	Center of Power	Motion review of class work: ‘Power’ of motion begins at feet, goes through hips into chest. Review of ‘floating’ vs. ‘Power’ (Ex: Push off the ground)	3D: Notes for class: (PORT) Power Orthographic Reference Twinning
Week 6	Bipedal Human 1	Animation Project Two HUMAN ANIMATION (Week 1 of 4): Technical: Animating a bigger rig IK/Fk switches Toolsets: Advanced Skeleton rigged character	Maya: Download and animate base rigged character and get used to using IK/Fk switching <ul style="list-style-type: none"> - Stand to pushup pose - Pushup - Pushup get up
Week 7	Bipedal Human 2	Animation Project Two (Week 2 of 4): Technical: Beginning/End poses Toolsets: Setting up image plane with movie for reference.	Maya: Using the supplied character rig, make one Maya file of basic three game poses: <ul style="list-style-type: none"> - Walk - Run - Jump Research: Research and reference poses <ul style="list-style-type: none"> - Existing animations - Video Reference - Drawn animations
Week 8	Bipedal Human 3	Animation Project Three (Week 3 of 4): Technical: Animation considerations with human biped: Still from the inside-out (Hips, now chest).	Maya: Start animating character Walk, Run and Jump using intermediary poses
Week 9	Bipedal Human 4	Animation Project Three (Week 4 of 4): Moments of impact <ul style="list-style-type: none"> - Jump Landing - Pushing off floor 	Maya : Finish up Walk, Run and Jump with smoothed keyframes. Upload final work to Blackboard.

Week 10	Class review of Walk, Run and Jump	Review and critique of chosen class samples	Choose unique character to bring to class or sign up to receive one
Week 11	Review of unique chosen character rig and character's backstory in 'Game'	Animation Project Three UNIQUE CHARACTER (Week 1 of 4): Maya: Set up character for final game moves Creative: Walk, Run and Jump and 'Unique Move' Ex: <ul style="list-style-type: none"> - Death - Special Attack - Healing Spell 	Research: Have similar move researched
Week 12	Poses and frames for each final character move	Animation Project Three (Week 2 of 4): Review of character's poses and final idle pose Review of frames allotted for each move.	3D: Set up base poses and middle poses for all four animations, Focus on character walk
Week 13	Power of each motion	Animation Project Three (Week 3 of 4): Review of power base, beginning of motion from the floor and through legs, into hips and continue into chest – finally into arms or legs.	3D: Focus on character run
Week 14	Weight of each motion	Animation Project Three (Week 4 of 4): Review of character's impact of gravity, weight for beginning and ending move	3D: Focus on character Jump
Week 15	Final Lab time	Review of character's impact of gravity, weight	3D: Focus on character Special Move
FINAL		Final Presentation uploaded	Refer to the final exam schedule in the USC <i>Schedule of Classes</i> at classes.usc.edu .

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, policy.usc.edu/scientific-misconduct.

Support Systems:

Student Health Counseling Services - (213) 740-7711 – 24/7 on call
engemannshc.usc.edu/counseling

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

Student Health Leave Coordinator – 213-821-4710

Located in the USC Support and Advocacy office, the Health Leave Coordinator processes requests for health leaves of absence and advocates for students taking such leaves when needed.

<https://policy.usc.edu/student-health-leave-absence/>

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) 740-4900 – 24/7 on call

engemannshc.usc.edu/rsvp

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

Office of Equity and Diversity (OED) | Title IX - (213) 740-5086

equity.usc.edu, titleix.usc.edu

Information about how to get help or help a survivor of harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following protected characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations.

Bias Assessment Response and Support - (213) 740-2421

studentaffairs.usc.edu/bias-assessment-response-support

Avenue to report incidents of bias, hate crimes, and microaggressions for appropriate investigation and response.

The Office of Disability Services and Programs - (213) 740-0776

dsp.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 Support and Advocacy - (213) 821-4710

studentaffairs.usc.edu/ssu

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.

Diversity and Inclusion

Diversity and Inclusion are foundational to the SCA community. We are committed to fostering a welcoming and supportive environment where students of all identities and backgrounds can flourish. The classroom should be a space for open discussion of ideas and self-expression; however, SCA will not tolerate verbal or written abuse, threats, harassment, intimidation or violence against person or property. If students are concerned about these matters in the classroom setting they are encouraged to contact their SCA Diversity and Inclusion Liaison, <http://cinema.usc.edu/about/diversity.cfm>; e-mail diversity@cinema.usc.edu. You can also report discrimination based on a protected class here <https://equity.usc.edu/harassment-or-discrimination/>

Disruptive Student Behavior:

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the Office of Student Judicial Affairs for disciplinary action.

PLEASE NOTE:

FOOD AND DRINKS (OTHER THAN WATER) ARE NOT PERMITTED IN ANY INSTRUCTIONAL SPACES IN THE CINEMATIC ARTS COMPLEX