

 **CTAN202L: Introduction to 3D Character Animation**

 **Spring 2021, 3 Units**

 **Thursdays: 8:00 - 9:50 pm PST (lab time)**

 **Fridays: 4:00 - 6:50 pm PST (Zoom Meeting)**

**Instructor: Professor Jason Reisig**

**Office: Zoom Meeting**

**Office Hours:** Wed 10am-12pm, Fri 1:30-3:30pm

**Contact Info:** jreisig@usc.edu

**Student Assistant: Jairus Williams**

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**Lab Instructor: Fredrik Nilsson**

**Contact Info:** frednilsson@gmail.com

**Course Description:**

This course introduces students to 3D character animation in Maya. With the aid of simple object and character-based rigs, we will begin by re-visiting the fundamentals of animated movement – extremes and breakdowns, timing/spacing/rhythm, weight and balance, squash and stretch, anticipation and overlap – in the context of 3D animation. As we progress through these basics, we will familiarize ourselves with Maya’s animation toolset and learn different 3D animation workflows. In the latter half of the course, we will work with character rigs of increasing complexity and place greater importance on attitude, personality and appeal. We will shift our focus from the mechanics of movement to emotion, dialogue, and acting performance.

**Learning Objectives and Outcomes:**

Over the course of this class, students will learn how to animate a variety of objects and simple characters in Maya, finishing the class with several good examples for their portfolios. They should also acquire a solid grasp of Maya’s animation toolset, be comfortable working with a variety of character rigs, and develop an organized approach to animating 3D characters.

**Prerequisite(s): CTAN 201**

**Recommended Preparation:**

Working knowledge of Maya, fundamentals of 2D animation, proficiency in some type of editing program (Adobe AE, Premiere, Final Cut, etc.).

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| **Recommended Reading Materials:**The Illusion of Life Ollie Johnston (Author), Frank Thomas (Author) The Animator's Survival Kit Richard Williams (Author) Inspired 3D Character Animation; Kyle Clark, Premiere Press, 2002 |

**Very important: Bring a portable (min 100 GB) hard drive with you to every class!**

**Lab Time: Students should expect to spend up to six hours lab time executing and learning the digital animation concepts outside of class. Failure to meet deadlines each week will constitute a reduction in the final grade.**

**Grading Breakdown:**

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| --- | --- |
|  | **% of Grade** |
| Participation | 15% |
| Weekly Assignments | 50% |
| Final Project | 35% |

**Grading Scale:**

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

**Grading is based upon:**

* completion of all aspects of the assignment
* timeliness (animation work produced and exhibited according to the schedule)
* excellence (how thoroughly and creatively each week’s work is explored)

**CLASS PARTICIPATION:**

Participation includes learning how to workshop ideas in a group, provide constructive criticism, respond to critiques of your own work, sharing observations with classmates in class. Late assignments will be penalized 1/3 grade for each class they are late.

**CRITIQUES:**

Crits will either be in the form of dailies with full participation or one on one, subject to change per student’s needs. Participation is required in critiques. Constructive critiques allow us to learn from each other. This process will aid you in the ability to talk about your work, and to analyze the work of others.

**ATTENDANCE:**

**Be on-time, and come to class.**

* ATTENDANCE WILL BE TAKEN 10 MINUTES AFTER THE START OF CLASS, by the SA.
* 2 absences = one grade lower / 3 absences = 2 grades lower / 4 = failing grade
* 3 tardies = 1/2 grade lower (ie. from A to A-).

**More on Attendance:**

Credit for a course cannot be given simply for being present. Your grade will be affected if you are unprepared or if you are absent. Successful courses depend on your presence; absences will interfere with your learning, as well as your grade. Absences will lower your grade. If you are ill or otherwise incapacitated, please email me BEFORE class. Note: an excused absence is NOT an email that is sent two minutes before class. All students must be in attendance the first day of class.

**ASSIGNMENTS:**

Each week offers specific deadlines students must meet and complete. The assignments lead toward the completion of the final animated project. This is a production class, so students must complete assignments on a timely and continuous basis. Film/Animation Production is very time consuming both intellectually and physically. It is expected that the students will spend considerable time outside class creating the work exhibited in the weekly class meetings.

* Assignments are to be playblasted at HD res and converted to compressed H.264 QT movies and uploaded to the shared Google drive on due dates, BEFORE class.
* If you miss class, it is up to you to catch up on the exercises and lectures covered.

**Assignments Grading: 0-10 points per grade**

* Students are expected to address notes, and show again the following week
* It's best to turn something in and show in progress
* Possible 2 total points improved for each revision.
* Assignments are graded on a 0-10 scale. 5 = fail, 6-8 pass, 9-10 above and beyond.

**Final Exam Project:**

**The last animation submission for this course is a compiled demo reel of all your work due by end of day, midnight of Final Exam Day.** The final submission includes a polished version of your Performance Project (lighting is optional)

**Academic Calendar - Spring Semester 2021 (73 instructional days)**

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| --- | --- | --- |
| Classes Begin | Fri | January 15 |
| Martin Luther King’s Birthday | Mon | January 18 |
| President’s Day | Mon | February 15 |
| Wellness Day (No classes) | Fri | March 12 |
| Wellness Day (No classes) | Tue | March 23 |
| Wellness Day (No classes) | Wed | April 7 |
| Wellness Day (No classes) | Thu | April 22 |
| Wellness Day (No classes) | Fri | April 30 |
| Classes End | Fri | April 30 |
| Study Days | Sat-Tue | May 1-May 4 |
| Exams | Wed-Wed | May 5-12 |
| Commencement | Fri | May 14 |
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**COURSE SCHEDULE:**

This schedule is subject to change depending upon the progress of the class. The instructor may add, delete, or change assignments and due dates during the semester. Any such changes will be announced in class and posted online.

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|  Fridays | **Topics/Daily Activities** | **Assignments** | **Due Dates** |
| Week 1Jan 15 | Intro, Animation Industry, Maya Overview, Bouncing Ball | Bouncing ball exercise | Jan 22 |
| Week 2Jan 22 | Posing the Flour Sack rig: weight, balance, attitude, Arcs, Squash and Stretch | Flour sack jump and land | Jan 29 |
| Week 3Jan 29 | Pendulums and Tails: working with FK chains, Overlap, drag, and anticipation | Arm swing and tail  | Feb 5 |
| Week 4Feb 5 | Timing and Spacing, Anticipation and Exaggeration | Heavy push/table pound | Feb 12 |
| Week 5Feb 12 | Intro to Walks, Creating Cycles, Intro to Biped rigs | Leg walk cycle | Feb 19 |
| Week 6Feb 19 | Walks, Adding Upper Body and Moving Through Space | Walk cycle | Feb 26 |
| Week 7Feb 26 |  Importance of Weight, Hand Animation, and Constraints | Char picking up and dropping a rock | Mar 5 |
| Week 8Mar 5 | Action and Attitudes, Adding Personality | Add personality to your walk cycle | Mar 19 |
| Week 9Mar 12 | No class (Wellness Day) |  |  |
| Week 10Mar 19 | Runs, Jumps, and Sneaks | Generic run, jump and sneak | Mar 26 |
| Week 11Mar 26 | Facial Animation Expressions | Eyes animation | Apr 2 |
| Week 12Apr 2 | Facial Animation Lip-Sync | Lip-sync to a dialog of your choice | Apr 9 |
| Week 13Apr 9 | Acting and Emotions, Intro Staging and posing, Acting & Video Reference | Create reference and block animation | Apr 16 |
| Week 14Apr 16 | Acting and Emotions | Reference material and IP animation | Apr 23 |
| Week 15Apr 23 | Polish | Continue animation | May 7 |
|  | **STUDY DAYS****MAY 1-4** |  |  |
|   | **FINAL REEL DUE****11:59pm PST MAY 7** |  |  |

**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](https://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](http://policy.usc.edu/scientific-misconduct).

**Support Systems:**

*Student Health Counseling Services - (213) 740-7711 – 24/7 on call*

[engemannshc.usc.edu/counseling](https://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](http://www.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](https://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](https://equity.usc.edu/), [titleix.usc.edu](http://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](https://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](http://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/ssa](https://studentaffairs.usc.edu/ssa/)

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](https://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](http://dps.usc.edu/), [emergency.usc.edu](http://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](http://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**