

# ANI 430 3D Character Animation

ANI 300 Fall 2020 | T/TH 11:50-1:20 pm | Online

DePaul School of  
Cinematic Arts

Instructor: Josh Jones

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Office Hours : TU 2:30-3:30pm, TU 9-10pm, TH 10-11am (via zoom or phone.  
Please email me in order to setup the meeting time.)

**Course Description** This course explores the art and techniques for character performance in 3D. Students will study and employ fundamental principles for character animation beginning with the essentials of blocking and Inbetweening, and continuing with the core mechanics including walk cycles, expressions, and lip sync. Students are required to animate weekly shots culminating in a final lip synced character performance. PREREQUISITE(S): ANI 231, or ANI 423, or equivalent experience

**Course Objectives** After completing this course, students will have:

- An extensive knowledge of Maya's animation tools.
- A broad understanding of all animation styles and techniques, and how they apply to and can aid animation in 3D.
- A solid base in animation fundamentals.
- Professional demo reel quality work.

**Texts and Materials** Required Texts  
**"The Animators Survival Kit"**  
Richard Williams, Publisher: Faber and Faber Inc.

Recommended Texts  
**"Stop Staring"**  
By Jason Osipa

Reference Websites  
[www.autodesk.com](http://www.autodesk.com)  
[highend3d.com](http://highend3d.com)  
[www.awn.com](http://www.awn.com)

**Attendance** Students are expected to attend every class during our regular zoom sessions. If for some reason you are unable to attend a class, it is your responsibility to let me know in advance. While each class will be recorded and made available for later review, the intention is to complement not replace the regular online class experience. Attendance for the final is required.

The student is responsible for any lectures or assignments missed. If an assignment is due a week that you are absent, it is your responsibility to make sure it still arrives on time.

**Participation** One of the best ways to learn in a classroom environment is through active participation in discussions and critiques. In general, we will be following a pattern of creating animation and then discussing it in critique in the following week. When I open up the floor for you to speak, please make the effort to voice your honest and constructive opinion. This will help you learn from your mistakes and progress with your animation skills.

**Assignments** Assignments must be handed in on time. *On time* means submitted through D2L one hour before class on the day the assignment is due. All assignments can be fixed up and turned back in later for a better grade if they were turned in on time.

**Late Work:** You are allotted one late assignment per quarter. This assignment must be completed and turned in by the 10<sup>th</sup> week of the quarter and will still receive full credit. Any other late assignment that you turn in will only count for half credit.

**Written Assignments:** Must be typed.

**Digital Assignments:** All assignments handed in digitally must be in the following format (please note upper and lower case usage)

- lastnameFirstname\_projectname.extension
- example: jonesJosh\_projectOne.jpg

**Special Accommodations:** If you have any special considerations please see the instructor.

**BACK UP YOUR WORK:** Failure of computer software and or Hardware will not be accepted as an extenuating circumstance for late projects or incomplete grades so back up your work at least once a week.

**Critiques** For animated assignments, you must use H.264 compression in QuickTime or MPEG4 format. Handing in something unfinished is always better than nothing at all! Due to the large size of our class, and the limited class time, not everyone's work will get a full review during class. If you'd like more feedback, arrange to discuss your work with me during my office hours. We will view and discuss everyone's final project during the last class.

<b>Grading</b>	<b>Assignments</b>	<b>80% of grade</b>		
	<b>Final Project</b>	<b>20% of grade</b>		
		<b>A = 100-93%</b>	<b>A- = 92-90%</b>	
	<b>B+ = 89-88%</b>	<b>B = 87-83%</b>	<b>B- = 82-80%</b>	
	<b>C+ = 79-78%</b>	<b>C = 77-73%</b>	<b>C- = 72-70%</b>	
	<b>D+ = 69-68%</b>	<b>D = 67-63%</b>	<b>D- = 62-60%</b>	<b>F = 59-0%</b>

**Your grade will depend on the following criteria:**

- Meeting Project Deadlines: It is vital to have your work available for critique. Work unavailable for critique will be considered late and will not be accepted unless you are using your one late assignment.
- Creativity and personal input into execution of project
- Coming prepared to class, including assigned reading and assignments
- Effective visually aesthetic solutions to all problems assigned
- Taking initiative to work outside of class and research
- Hard work and sweat

**Academic Integrity** Work done for this course must adhere to the DePaul University Academic Integrity Policy, which you can review in the *Student Handbook* or by visiting <https://courses.depaul.edu/university-catalog/academic-handbooks/Pages/default.aspx>

**Plagiarism** The university and school policy on plagiarism can be summarized as follows: Students in this course, as well as all other courses in which independent research or writing play a vital part in the course requirements, should be aware of the strong sanctions that can be imposed against someone guilty of plagiarism. If proven, a charge of plagiarism could result in an automatic F in the course and possible expulsion. The strongest of sanctions will be imposed on anyone who submits as his/her own work a report, examination paper, computer file, lab report, or other assignment which has been prepared by someone else. If you have any questions or doubts about what plagiarism entails or how to properly acknowledge source materials be sure to consult the instructor.

**Materials and Supplies** All assignments in this class will be submitted digitally online through D2L unless otherwise noted.

Any assignment that is too big to fit on D2L may be put on a Flash Drive, CDROM, or DVD and be delivered to me directly. You can also use a file transfer service such as dropbox or [www.wetransfer.com](http://www.wetransfer.com). Please do not send me links to your google drive. It crashes my email most of the time.

## Schedule

This schedule is subject to change throughout the semester, and will be adapted to fit the needs of the students.

Unless otherwise noted, all assignments will be submitted in digital format online 1 hour prior to class. Assignments may be submitted earlier.

### Lecture

### Assignment

<b>Week 1</b> Sep 10	<b>Lecture:</b> Defining Character Through Action	<b>Assignment:</b> Character observation and Character Bones
<b>Week 2</b> Sep 15, 17	The aesthetics of a good pose Working effectively with a rig	<b>Assignments:</b> Rendered Emotion Poses  <b>Watch:</b> Tracer and Pose Design 101
<b>Week 3</b> Sep 22, 24	<b>Review Poses</b>  <b>Lecture:</b> Review of pose-to-pose and straight ahead animation styles. The 3D animation process.  The Body as a Unit Moving Line of Action Soft and Hard accents.  Inverse Kinematics vs. forward Kinematics.	<b>For Next Class:</b> Big Step Exercise and reference video.  <i>Read ASK "Spacing" pg. 84-99. Read ASK "Anticipation" pg. 273-284 and "Reaction" pg. 294-296.</i>
<b>Week 4</b> Sep 29 Oct 1	<b>Critique Keys and Extremes</b>  <b>Lecture:</b> The art of Inbetweening.  Spacing, slow in/slow out, breakdown poses, moving on arcs, overlapping action.	<b>For next class:</b> Do breakdowns and inbetween Big Step animation from last week.  <i>Read ASK "flexibility" pg. 227-245 and "overlapping action" pg. 249-251.</i>
<b>Week 5</b> Oct 6, 8	<b>Critique final Big Step animation</b>  <b>Lecture:</b> Blocking out a complex shot Physics study vs. Character study Animation Observation	<b>For next week:</b> Pro Blocking

<p><b>Week 6</b> Oct 13, 15</p>	<p><b>Critique Pro Blocking</b></p> <p><b>Lecture:</b> The walk cycle. Giving walks character! Establishing weight.</p>	<p><b>For next class:</b> Complete character walk cycles.</p> <p><i>Read ASK "The Walk Cycle" pg. 102-124.</i></p>
<p><b>Week 7</b> Oct 20, 22</p>	<p><b>Critique character walk cycles</b></p> <p><b>Lecture:</b> Character expression. Eyes, eyebrows, and blinks. Changing expression</p> <p>Creating character through expression</p>	<p><b>For next week:</b> Find headshot dialogue and thumbnail out storyboard of thought progression.</p> <p><i>Read ASK "Dialogue" pg. 304-313.</i></p>
<p><b>Week 8</b> Oct 27, 29</p>	<p><b>Lecture:</b> Continue with expression. Quick n' Dirty lip sync.</p>	<p><b>Due next week:</b> Head shot animation. Must be lit and rendered as a quicktime movie for next week.</p>
<p><b>Week 9</b> Nov 3, 5</p>	<p><b>Critique head shot animations.</b></p> <p><b>Introduce Final Project</b></p> <p><b>Lecture:</b> Giving your characters business-context, subtext and layered performance Performance in animation: Realism, exaggeration, over-acting</p>	<p><b>For next class:</b> Find a sound clip. Thumbnail out a storyboard including all key poses for the action.</p> <p>Lay out key poses and extremes for your shot. Submit animation as a playblast <b>with sound</b>.</p>
<p><b>Week 10</b> Nov 10, 12</p>	<p><b>Review animation pop-throughs</b></p> <p><b>Lecture:</b> Bringing more life into characters. A to X to B "High-brow" lip sync</p>	<p><b>For next class:</b> Add breakdowns and begin inbetweening on your shot</p> <p><i>Read ASK pg. 217-227</i></p>
<p><b>Week 11</b> Nov 17</p>	<p><b>Individual and peer critiques on final progress</b></p>	<p><b>For next class:</b> Final animation is due</p>
<p><b>Week 12</b> Nov 24</p>	<p><b>ANIMATION FINAL</b> <b>Tuesday November 24th, 11:30-1:45 pm</b></p> <p><b>ATTENDANCE MANDATORY</b></p>	<p><b>Due: Final Project.</b> <b>Rendered and lit.</b></p>