

DePaul
CIM

3D Animation

Spring 2014 | T/Th 11:50 – 1:20 | CDM 722

Instructor: Josh Jones

ANI 231

Office: CST 517

Email: jjones@cim.depaul.edu (best way to reach me)

Phone: (312)362-5876

Office hours :

Tu: 3:00-4:00pm, 9:00-10:00pm

Th: 10:00-11:00am

Course Description

In this course, students will be introduced to the art of animating in 3D through the use of traditional animation principles. Topics will include: principles of animation, storyboarding, transformations and deformations of 3D objects, rigging, camera and light animation. Emphasis will be placed on using the computer as a tool to create animation for cinema and game applications, as well as an instrument of experimentation. PREREQUISITE(S): ANI 230

Course Objectives

After completing this course, students will have:

1. A solid base in animation fundamentals.
2. The ability to use Maya's animation tools to apply fundamentals to animation applications
3. An understanding of how camera and lighting affect animation, and how they can be used together to tell story.
4. A broad understanding of all animation styles and techniques, and how they apply to and can aid animation in 3D.

Texts and Materials

Recommended TEXTS:

"The Animators Survival Kit"

Richard Williams, Publisher: Faber and Faber Inc. 2001, Cost \$30.00.

<http://cdmflash.cdm.depaul.edu/coltube/movie>

"Introducing Autodesk Maya 2013"

Derakhshani, John Wiley & Sons, 2011. ISBN: 978-0470900215

Reference Websites

www.autodesk.com

www.creativecrash.com

www.awn.com

Attendance

Students are expected to attend every class. We cover an enormous amount of material in every class, and missing even one can be a huge setback.

Three absences will result in the lowering of your final grade one full letter. Any student missing 4 classes will be given a grade of "F" for the semester.

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. This is for your benefit. A good portion of our class time will be spent doing hands on tutorials, screening films, and critiquing work. Lecture notes will not make up for these missed learning experiences.

You may not miss the final class critique. Doing so will equal an automatic two letter grade reduction of your final grade. If for some reason you cannot make this class contact your instructor BEFORE the class that you must miss. Excuses given after the fact will not be accepted.

No incompletes will be given without documented proof of circumstances beyond your control.

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.

Class Work Assignments

- Must be handed in on time. Late assignments will be accepted with teacher discretion only. On time means submitted through COLWeb one hour BEFORE class on the day the assignment is due. Students who use class time to finish assignments the day they are due will forfeit the right to hand in that assignment. Class time is for working with the material at hand, not finishing late assignments.
- Late work:
 - Late work will not be accepted unless approved of PRIOR to the class in which it is due or accompanied by a valid medical excuse.
 - You are allotted one “freebie” per term that allows you to turn ONE assignment late for full credit (up until the 10th week of the term). You only get one of these per term. All other late assignments are forfeited.
- 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.mb

* 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 daily.

Critiques Unless I tell you otherwise, assigned work must be completed and submitted through COLweb one hour BEFORE class starts. This will keep us from wasting valuable class time. In most cases (I'll let you know the exceptions) I request that you use **QuickTime** format unless discussed with me previously. AVI's are difficult to watch frame by frame (something we will be doing a lot of). **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.

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

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 "freebie."
- Creativity and personal input into execution of project
- Coming prepared to class, including assigned reading and assignments
- Showing in-progress work, which can benefit from suggestions, rather than presenting entirely new work at critiques
- Effective visually aesthetic solutions to all problems assigned
- Taking initiative to work outside of class and research
- Hard work and sweat
- Participation in critiques and discussions

Cell Phones Use of cell phones in the class and the lab is prohibited. Please turn your phone off before entering class. Mistakes will happen (to me too), but repeated failure to turn your phone off will result in a lowered grade for the class. All phone conversations should be conducted outside the class – don't disturb those working in the lab and put others in an uncomfortable situation.

Headphones Whether working with sound in your project, or simply listening to music while working, you need to be considerate of others and wear headphones. Be aware that if the volume is high enough, others can still hear what you're listening to despite the headphones. Inconsiderate behavior will result in a lowered grade.

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 <http://studentaffairs.depaul.edu/homehandbook.html>.

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 must be submitted digitally online via COLweb.

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

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| Week 1 April 1,3 | Introduction to 3D Animation Keyframing Playblasts Bouncing Ball Observation and Diagramming | Watch Ani Survival Kit 02: Timing and Spacing. 00:00 to 22:30 Assignment: Animate a bouncing ball frame by frame. |
| Week 2 April 8,10 | 3 Bouncing Balls Animating with Curves Rendering an Animation | Assignment: Animate three bouncing balls...basketball, beach ball, and bowling ball. |
| Week 3 April 15,17 | Introducing Character Intro to working with rigs Blocking/Timing Stepping through an animation Self-propelled ball (in class) | Assignment: One legged up/down jump Watch Ani Survival Kit 12: Anticipations and Accents 00:00 to 9:17 |
| Week 4 April 22,24 | Introduction to simple rigs Bones Basic Skinning Layers Component Editor Adding to an existing rig | Assignment: Pin the Appendage on the ??? |
| Week 5 April 29, May 1 | Intro to Overlapping Action Dope Sheet In Class Exercises: Extended Spine Hand Rolls | Assignment: Overlap the Appendage. Assignment: Advanced Fist Pound |

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| | Intermediate Inbetweening Breakdown Poses Basic Splining In-Class Fist Pound | Watch Ani Survival Kit 08: Flexibility 13:52 to 34:33 |
| Week 6 May 6, 8 | Full Body Character Rigs Good rig operation Parented Rigs Adding Attributes Creating Blend Shapes | Assignment: Create Complete Parented Rig Character |
| Week 7 May 13, 15 | Blocking for full body character animation Creating a "key all" function Basic Breakdowns | Assignment: Character Jump |
| Week 8 May 20, 22 | Introduction to walks Hip and foot movement Balance, Weight, Character | Assignment: 3D Walk Cycle Watch Ani Survival Kit 05: Building Walks 00:00 to 26:00 |
| Week 9 May 27, 29 | Advanced Splining Techniques Camera Moves | Assignment: Block out Thief animation. |
| Week 10 June 3, 5 | In class progress critiques on final animation. | Assignment: Complete breakdowns and render thief animation. |
| Week 11 June 10 | FINAL CRITIQUE Attendance is Mandatory June 10, 11:45 -2:00pm, room 722 | Assignment: Final Rendered Animation Due |