

San José State University
Design Department - College of Humanities and Arts
Animation and Illustration program

ANI 51b Intro to 3D Animation

Fall 2018

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Office Hours: Mondays and Thursdays – 11:00 am to 12:00 (ART 223 or ART 224)

Class Days/Time: Mondays and Weds 8:00am to 10:50am

Classroom: ART 224 (Mac Lab)

Course WebPage

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on the Canvas Course website. You are responsible for regularly checking our class page on Canvas to learn of any updates. In addition please bookmark our course resources site:

<https://3dbasics.wordpress.com/>

Course Description

Basic concepts and professional practices used in 3D computer animation. Application of traditional principles of animation to the 3D digital environment. Prerequisites: Allowed declared Animation major only Misc/ Activity: 6 hours activity

This class will introduce students to basic concepts and practices currently used in the field of 3D computer animation. Today, 3D Computer animation is a very dynamic and heavily interdisciplinary field, involving fine arts, science, mathematics, physics, acting and animation. In this class, we will focus our attention on how to create believable movement by applying the traditional principles of animation to the 3D digital environment and using the computer as a tool to animate.

Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Demonstrate through their animation assignments that they can apply the following 2D principles of animation to 3D scenes: arcs, timing, spacing (slow in, slow out), squash and stretch, staging and overlapping action.
2. Create believable scenes in 3D depicting: a bouncing ball; two balls bouncing with different weights; an a flexible moving whip; a ball bouncing with an overlapping tail; a basic human walk; a personality walk.

Course Requirements and Assignments

“Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practice. Other course structures will have equivalent workload expectations as described in the syllabus.”

Please schedule time to work in Maya daily. Animation is like playing a musical instrument – you will need daily practice. I want to stress that if you don't practice daily, you will mostly not get good results. If you really can't practice daily, try every other day. What really doesn't work is to work on Maya the night before class, just enough to do the assignments. To pass this class you will have to put at least 9 hours per week into your assignments and practicing Maya.

There will be weekly assignments and required readings. Students should complete the weekly assignments and have them assembled as a demo reel at the end of the semester. Chosen assignments and demo reel will be graded, as well as participation in class.

Students are expected to complete and hand in every assignment for the course. Deadline for assignments will be strictly observed. **STUDENTS ARE RESPONSIBLE FOR KEEPING A DIGITAL COPY OF ALL SCENES AND ASSIGNMENTS. PLEASE BACKUP YOUR WORK OFTEN.**

University Policies

General Expectations, Rights and Responsibilities of the Student
See University Policy S90–5 at <http://www.sjsu.edu/senate/docs/S90-5.pdf>. More detailed information on a variety of related topics is available in the SJSU catalog, at <http://info.sjsu.edu/web-dbgen/narr/catalog/rec-12234.12506.html>.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's Catalog Policies section at <http://info.sjsu.edu/static/catalog/policies.html>. Add/drop deadlines can be found on the current academic year calendars document on the Academic Calendars webpage at http://www.sjsu.edu/provost/services/academic_calendars/. The Late Drop Policy is available at <http://www.sjsu.edu/aars/policies/latedrops/policy/>. Students should be aware of the current deadlines and penalties for dropping classes. Information about the latest changes and news is available at the Advising Hub at <http://www.sjsu.edu/advising/>.

Consent for Recording of Class and Public Sharing of Instructor Material
University Policy S12-7

Academic integrity

University Academic Integrity Policy S07-2 at <http://www.sjsu.edu/senate/docs/S07-2.pdf> requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The Student Conduct and Ethical Development website is available at <http://www.sjsu.edu/studentconduct/>.

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities requesting accommodations must register with the Accessible Education Center (AEC) at <http://www.sjsu.edu/aec> to establish a record of their disability.

Accommodation to Students' Religious Holidays

See University Policy S14-7 at <http://www.sjsu.edu/senate/docs/S14-7.pdf>.

Student Technology Resources

Computer labs for student use are available in the Animation and Illustration program computer lab, in room ART 224. A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include DV and HD digital camcorders; digital still cameras; video, slide and overhead projectors; DVD, CD, and audio-tape players; sound systems, wireless microphones, projection screens and monitors.

SJSU Peer Connections

Visit Peer Connections website at <http://peerconnections.sjsu.edu> for more information.

SJSU Writing Center

Please visit the Writing Center website at <http://www.sjsu.edu/writingcenter>.

SJSU Counseling Services

The SJSU Counseling Services is located on the corner of 7th Street and San Fernando Street, in Room 201, Administration Building. Professional psychologists, social workers, and counselors are available to provide consultations on issues of student mental health, campus climate or psychological and academic issues on an individual, couple, or group basis. To schedule an appointment or learn more information, visit Counseling Services website at <http://www.sjsu.edu/counseling>.

What to Expect

Plan to work on Maya a minimum of one hour per day (and a maximum of 3 hours per day) during these first 4 weeks. In the days you are done with your assignment use the time to revise the interface concepts discussed in class. Maya also has some simple tutorials that can be really helpful as a complement. Working at least one hour per day will establish a good rhythm and will make the learning process fun and much less frustrating.

We recommend that you schedule time for practicing Maya and stick to it. Do not limit yourself to do the assignments - read the resources and practice, like you would do with a musical instrument, sometimes even repeating the same task many times.

Look for help online or with your friends. Try to plan with class peers to get together in the lab for studying - this way you can help one another.

If you encounter problems, try to trouble shoot, thinking of possible reasons for things to be not working. If after 10 minutes trouble shooting you don't get results, call or email friends, or look online - there's plenty of Maya forums and maybe someone out there has had exactly the same issue as you. Basically, don't suffer alone: there's a lot of people out there trying to figure the same stuff as you.

Types of Assignments

There are 3 types of Assignments:

1. Maya assignments - hands-on using a computer
2. Sketchbook assignments - Drawing on your sketchbook
3. Readings and consulting resources.

Class Supplies

-3D characters:

Please purchase the “Body Mechanics Rig Mega Pack” by Joe Daniels, from gumroad. We have a discount, so when you check out please enter the code sjsudiscount for a 30% discount.

Here’s the site:

<https://gumroad.com/l/xhRK#>

- An **external drive** to store and back up classes. It doesn’t need to be a new one or exclusive to this class. Just any drive where you have a folder to store class files from 51b

- **Sketch book and pencils** for drawing.

-You will be required to shoot video reference for some of the assignments. Please be prepared to do so, usually a smart phone will be perfect for it.

Support Sites

Support sites (please bookmark them in your browser):

<https://3dbasics.wordpress.com/>

<https://www.khanacademy.org/partner-content/pixar/animate>

<https://area.autodesk.com/>

Software

-Download **Filmic Pro** (or similar) for your smart phone. This software will allow you to shoot video at 24fps which is the frame rate required for this class.

<https://itunes.apple.com/us/app/filmic-pro/id436577167?mt=8>

- The latest version of **Maya** is available in all computers in the animation lab on campus. If you want to download Maya 17 to your computer it is free. But make sure your computer has the system requirements required.

- **Adobe creative** suite and **Microsoft Office or Open Office**. You will need the ability to perform a simple film editing on your shots and to design textures for your characters and props. Also you will need a good text editor. Please download Microsoft Office suite and Adobe Creative Suite and have it installed in your personal computer. It is free for SJSU students:

<http://its.sjsu.edu/services/software/>

Required Books

The Animator's Survival kit

By Richard Williams

Published by Faber and Faber

ISBN 0-571-20228-4

ISBN 0-571-21268-9

Simplified Drawing for Planning Animation

By Wayne Gilbert

Published by Anamie Entertainment Ltd

ISBN-10: 097134390X

ISBN-13: 978-0971343900

The Illusion of Life – Disney Animation

By Ollie Johnston and Frank Thomas

Publisher: Disney Editions; Revised, Subsequent edition (October 19, 1995)

ISBN-10: 0786860707

ISBN-13: 978-0786860708

Please purchase them ASAP.

Lab Rules

Failure to comply with the following rules will result in a one week expulsion from the lab:

1. Food is prohibited in the computer lab
2. Beverages may be kept only on the shelf in the rear of the lab
3. Only students registered in digital classes or BFA are allowed in the lab
4. No internet browsing is allowed during class time. That includes social network sites, any kind of chat or instant messages, news, youtube or any other site at all. Students caught browsing the internet during class will be promptly removed from the lab.
5. A notebook and taking notes is mandatory during all lectures or when teacher is explaining a topic or giving assignment guidelines.
6. The lab is for digital class related work only (No painting, charcoal rendering, sculpting, massaging, etc...)
7. No inappropriate imagery on the computers nor dry erase board
8. Headphones only; no sounds audible to other students allowed
9. Do not disconnect, attach, rearrange, or install anything on the computer systems (USB and external drives are permitted)
10. The lab doors must remain closed and locked at all times - do not prop the door open!
11. Cel phones should be turned off in the lab

Grades

Grades Breakdown:

10% = Heavy and Light bouncing balls

10 % = Ball with tail

20% = Basic Walk cycle

30% = Personality walk

20 % = Final reel with all animations, including any revision you want to present

10 % = Participation and overall engagement with course and class

Grading Percentage Breakdown

94% and above = A

93% - 90% = A-

89% - 87% = B+

86% - 84% = B

83% - 80% = B-

79% - 77% = C+

76% - 74% = C

73% - 70% = C-

69% - 67% = D+

66% - 64% = D

63% - 60% = D-

below 60% = F

Please note:

A = Excellent or Superior; or top 10% (93 to 100) = 4.0

B = Above Average; or second 10% (83-92) = 3.0

C = Average; or third 10% (77-82) = 2.0

D = Below average, minimum passing grade (69-76); or fourth 10% = 1.00

F = Failure or Exceptionally Poor; or bottom 60% (0-68) = 0.00

Attendance

Attendance

Students are expected to attend class regularly. Lateness of over 15 minutes counts as an absence. Students with 3 or more consecutive non-justified absences will most likely fail the class – in three weeks we will cover a lot of ground and if you miss three consecutive weeks of classes it will be really hard to catch up later. Please send me an email (preferably in advance) if you are unable to attend class.

NOTE that University policy F69-24 at <http://www.sjsu.edu/senate/docs/F69-24.pdf> states that “Students should attend all meetings of their class

Weekly Schedule

Maya's Interface

The goal of the "Introduction and Interface" section of this course is to get you to know the basics of Maya's interface, enough for you to move things around, navigate different layouts, and be able to set key frames, create some basic animation and output a movie file with it.

Maya is a complex software and our goal is NOT to learn everything about Maya – our goal is to know enough to be able to create animation which is believable and fun to watch. It is important to complete all the assignments and allow time for yourself to get used to Maya. It takes time and it takes practice.

Working a little bit everyday is much better than to do it all at once.

Wednesday 8/22

IN CLASS:

1 . INTRODUCTION

Introduction To ART 051 Intro to 3D Animation

2 . INTERFACE OVERVIEW part 1

TOPICS: Establishing work routines; Overview of Maya Interface; Playing with shapes, colors, textures, scaling and moving things around;

ASSIGNMENTS

Due on Mon 8/27

Online:

1. sign up for Pixar in a Box (free, Khan academy course); do the whole "Intro to Animation section" (40 min)

Hands-on practice:

2. open Maya and do an interface assignment TBD
3. Buy course supplies
4. Order books required for course ASAP

Monday 8/27

IN CLASS:

1. INTERFACE OVERVIEW part 2

- Review from last class;
- Animation interface: time slider, graph editor, dope sheet, setting key frames, editing key frames, different types of tangents (linear, stepped, spline, auto);
- How to shoot a playblast

ASSIGNMENTS

Due on Weds 8/29

Hands-on practice:

1. SPACING: Slow in and slow out with simple geometric shapes falling vertically (translation and rotation) (60 min). Shapes should be visible at the same time on screen, and animation of each happens simultaneously, each one with a different acceleration and deceleration.

2. Same idea above (on another movie) file using rotation instead of translation

* that means you will submit two different playblast movies, one for translations, another for rotations

Reading: Pages 84-89 of The Animator's Survival Kit

Online:

Please do the following Playblast tutorial (30 minutes):

<https://area.autodesk.com/tutorials/playblasting-animation-in-maya/>

Wednesday 8/29

IN CLASS:

1. INTERFACE OVERVIEW part 2

REVIEW TOPICS: Graphic Editor and Dope sheet; Planning for Animation; Weight, gravity, speed, timing and spacing in animation; Curves and tangents in the graph editor: spline, flat, stepped, linear

1. Homework Reivew
2. Controlling Timing and spacing using the graph editor
3. Rolling balls

ASSIGNMENTS

Due on Weds 9/5

Online:

1. Victore Navone Splinophilia Part 1:
http://www.navone.org/HTML/Tutorial_Splines1.htm

Hands-on practice:

Ball rolling and coming to a stop (physically correct and believable)

* Optional plus Rolling balls assignment:

1. one light ball and one heavy ball in the same scene - rotation and translation at the same time

Sketchbook

1. In your sketch book, draw from observation people eating or talking at the SJSU cafeteria. Drawings don't need to have a lot of detail, please try to capture their overall posture and pose only. Minimum of 6 sketches.

Bouncing Ball

In this section we will work on the traditional bouncing ball assignments, focusing on using principles of animation to achieve believability in the movements. Staging, timing, spacing, Squash and Stretch, arcs and even overlapping action have a big role in the bouncing ball.

Make sure to use this section to correctly apply the principles of animation to your work, as well as to feel more comfortable editing your work in the graph editor.

Wednesday 9/05

IN CLASS:

1. REVIEW LAST CLASS ASSIGNMENTS

2. WEEKLY DRAWINGS:

Weekly drawing assignments explanation; Introduce Wayne Gilbert Planning for animation book;

3. VERTICAL BOUNCING BALL, with focus on Weight, timing, Spacing, Easy ins and Easy outs.

4. TRACING SPACING: How to use the transparencies and the “train tracks” to figure out your spacing;

ASSIGNMENTS

Due on Mon 9/10

Hands-on Practice

1. Ball bouncing in place, physically based, losing height as time passes (no squash and stretch)

2. Challenge assignment: falling cube (cube falls and bounces once or twice)

*use graph editor to edit your curves and transparencies to check your spacing

Readings:

Read pages 92-94 from the book “Animator’s Survival Kit”

Sketch Book:

1. Read pages 11 to 10 of the “Planning Animation book” and study how to simplify your drawings by copying the drawings in these pages, paying attention to the basic shapes the author uses to form the figure

Monday 9/10

IN CLASS:

TOPICS: Weight, Timing, Spacing, Squash and Stretch

1. Understanding Maya Projects
2. Review Vertical Bouncing Ball Assignment
3. Planning for Animation

Drawing/Planning for computer Animation;

Download software to shoot reference at 24 fps;

4. Bouncing Ball Across the screen

ASSIGNMENTS

Due on Weds 9/12

Hands-on Practice:

1. Refine/Address notes in vertical Bouncing Ball Assignment
2. First pass on Ball bouncing across the screen (no squash and stretch)
3. Maya Projects Tutorial (30 min) : <https://area.autodesk.com/tutorials/series/maya-2018-tips/about-maya-projects/>

Readings:

1. From "The Illusion of Life" read Chapter 3, pages 47 to 70

Sketchbook:

1. Using the basic lines and shapes described in pages 6,7 and 10 of the book "Planning Animation" try to create your own characters, and also try to modify the poses just a little bit. Minimum of 8 sketches with variations of the drawings from the book.

Wednesday 9/12

IN CLASS:

TOPICS: Weight, Timing, Spacing, Squash and Stretch

1. Review Bouncing ball across the screen Assignment
2. ADD SQUASH AND STRECTH TO YOUR VERTICAL BOUNCING BALL
3. WHEN and how to add squash and stretch.

ASSIGNMENTS

Due on Mon 9/17

Hands-on Practice:

1. Animate a VERTICAL Bouncing ball with Squash and Stretch
2. Animate a bouncing ball with squash and stretch going across the screen

*you can use your original bouncing ball assignments and simply add squash and stretch

Sketchbook:

1. Study pages 11-15 from the book "Planning Animation". Choose your favorite 6 drawings and copy them in your skethbook paying attention to the basic shapes the author uses to construct the figure.

Monday 9/17

IN CLASS:

1. Review Assignments from last week
2. NEW TOPIC: Weight. How can we show that one ball is heavy than the other?

ASSIGNMENTS

Due for grades on Mon 9/24

Graded Assignment:

1. Bouncing Ball – FOR GRADES

Animate two bouncing balls, using squash and stretch, making sure you show the difference of weight/mass in between them: one ball should be very heavy and the other one very light. They both should ball across the screen, and they both should have squash and stretch. Please shoot video ref and plan for this assignment on paper before animating on the computer!)

One due date, please bring your video reference, a JPEG image showing your planning thumbnails, a quicktime with your final assignment. This assignment will be graded (20% of your total grades)

For next class, please bring video reference, planning and a first pass blocking with your top and bottom positions, and correct timing and spacing for at least one of the balls (not need to add squash and stretch yet).

Readings: pages 253-256 of the Animator's Survival Kit

Wednesday 9/19

IN CLASS:

1. Review work in progress of heavy and light ball assignment (including planning sketches, video reference etc)

ASSIGNMENTS

Due on Mon 9/24

Graded Assignment:

Finish you Heavy and Light assignments for grades. Polish your animation and create a clean playblast for presentation. Submit your final scene via Syncsketch.

Monday 9/24

IN CLASS:

1. Screen and grade Heavy and Light bouncing Ball assignments

ASSIGNMENTS	Due on Mon 10/1
Readings:	
Sketchbook: Draw from observation people playing at a park (sports, kids, frisbee etc) Remember the basic shapes and line the author of "Planning Animation" uses to construct his sports sketches? Try to do simplified sketches using similar techniques - basic construction shapes like circles, ovals and cubes to design the head, hips, chest or torso. simple lines for legs and arms.	

Overlapping Action

Overlapping Action is what makes objects or body parts feel flexible, and flexibility is a very important part of animation. We achieve flexibility by using overlapping action. Like spacing, overlapping action is also based on observation and on the laws of physics, though is highly “stylizable”, of course.

This section is super important, so make sure to log a lot of practicing time! Do your very best everytime you tackle one of the assignments in this section and be patient with yourself: It is very usual that students end up repeating the same assignment a couple of times until you get it right, but the pay off is huge! Repetition is a great way to learn, as long as you trouble shoot, progress a little everytime, and pay attention to what you are doing.

Overlapping action is everywhere in animation, and when you do it well it makes your animation look so much better. I

Weds 9/26

IN CLASS:

NEW TOPIC: Overlapping Action.

1. Explain the concept, show videos, do a demo.
2. Animate a pendulum swinging in place, swinging side to side

ASSIGNMENTS

Due Mon 10/1

Hands-on Practice:

1. with sideways translation of the base (driving force)
2. Revise your side to side swing and make it perfect! Re-do it if you need.

Sketchbook:

Read pages 15-21 of "Planning Animation". Choose 4 drawings and copy them to your sketchbook, paying attention in how you are drawing the opposite forces.

Readings: pages 217-241 of the Animator's Survival Kit

Mon 10/01

IN CLASS:

TOPICS: More on overlapping action - how to manage the graph editor pose to pose, and straight ahead; driving force, and its effect on the overlapping action; copying and pasting key frames in graph editor and on the timeline to create overlapping action. Explain Ball with Tail assignment;

1. REVIEW both pendulum assignments

ASSIGNMENTS

Due Weds 10/3

Hands-on Practice:

1. Arm Studies (arm swinging side to side as when we walk; extreme positions should be in frames 0-12-24-36-48 etc). What is the difference between our arms and a swinging pendulum?
2. Start on the ball with tail assignment. Plan on paper and do a first pass blocking

Sketchbook:

Draw people carrying things OR people pushing things OR people pulling things. The best is to find the real action in the real world (maybe at a store, construction site or somebody moving next door?). If you can't find reference in the real world use roommates or pictures for reference.

Weds 10/03

IN CLASS:

1. Review arm swing;
2. Review planning and first pass of Ball with tail assignment

ASSIGNMENTS

Due on Mon 10/08

Graded Assignment:

BALL WITH TAIL DUE FOR GRADES on 10/08!!!

The final version of your ball with tail assignment will be graded (10% of your total grades)

Please present a clean and well staged assignment in the next class

Mon 10/08

IN CLASS:

BALL WITH TAIL DUE FOR GRADES

Review and grade assignments

The final version of your ball with tail assignment will be graded (10% of your total grades)

ASSIGNMENTS

Due on weds 10/010

Reading:

Read from Richard Williams "Walks" section, pages 102- 117

Hands-on practice:

record video reference of your own walk

find your positions in the video and check what frames they fall on (make sure your are shooting video at 24fps)

Walk Cycles

Walk Cycles are also a traditional assignment for Animators.

By studying how a person walk, breaking the movements down and animating a character walking, animators can understand about gravity, weight shifts, and most importantly, how the many different parts of the body interact in order to make someone simply move forward. Hips, legs, feet, torso, arms, head - each body parts moves in a different way, but it is the harmonic movement of all the body parts together than can produce a believable walk.

There's so much to learn about walks. They are so complex and it is so cool when it works! Many professional animators still practice walk cycles.

For this first walk assignment in 3d we will start with a basic walk or Vanilla walk. After practicing the basic walk we will then try a personality walk (or character walk) which will be our next assignment after this.

Because Walks are such an important exercise for animators, there are a lot of books that explain how to do it. Please make sure to consult them. Read about walks, and try to understand it. And, as always, observation should be always be your starting point: video reference and analysis of the footage will give you excellent material to start (remember to shoot at 24fps for accuracy)

Weds 10/10

IN CLASS:

NEW TOPIC: BASIC WALK PART 1:

Key poses for a walk, mechanics of walk

Transfer of weight during a walk, balance

1. Learn the steps to create animation: research, planning, blocking, animation, final touches
2. Planning for Walk Cycle animation
3. HANDS ON: BLOCKING THE LOWER BODY (part 1)

ASSIGNMENTS

Due on Mon 10/15

Hands-on Practice:

Keep going with the blocking for the Walk Cycle using “auto” curves - legs and hips only - extend your animation to frame 72, keeping steps on the same intervals (a new pose at every 3rd frame).

Sketchbook:

Read pages 45-52 of “Planning Animation”. This section shows a simplified way to draw the torso. What is important for us, animators, is to show the orientation of your torso in your drawing - and sometimes the hips are turned one way while the chest is turned the other way... use reference of great torso poses and try to apply the ideas from the book. Minimum of 8 sketches.

Mon 10/15

IN CLASS:

HANDS ON IN CLASS:

BASIC WALK (ADDING DETAIL TO LOWER BODY)

(Walk cycle part 2)

TOPICS:

Peeling off the heel from the floor, overlapping on toes, how to polish a walk.

ASSIGNMENTS

Due on Weds 10/17

Hands-on Practice

1. Refining legs on your Walk Cycle all the way to frame 72

Sketchbook:

Read pages 53-55 of "Planning Animation". This section shows a simplified way to draw legs and feet. use your own reference depicting fun poses and try to apply the ideas from the book in your own sketches.

Minimum of 8 sketches.

Weds 10/17

IN CLASS:

HANDS ON IN CLASS:

BASIC WALK (ADDING ANIMATION ON SPINE, HEAD AND ARMS)

TOPICS: Upper body animation on a walk.

ASSIGNMENTS

Due on Mon 10/22

1. Add upper body animation to your whole walk cycle, all the way to frame 72

The walk cycle assignment is due only on Mon 10/29

We will use next week to learn about lighting and rendering.

Meanwhile, please keep polishing your walk, so that the animation is very gracious and fluent, with perfect weight shift, flexibility on spine and arms, etc.

Sketchbook:

Read pages 56-58 of "Planning Animation". This section shows a simplified way to draw hands. use your own hand as reference and try to apply the ideas from the book for different poses. Minimum of 6 sketches.

Mon 10/22

IN CLASS:

Lecture and demo: 3 point lighting + rendering

Maya light types

Casting shadows

Rendering with Maya software render engine

ASSIGNMENTS

Due on Weds 10/24

Hands-on Practice

1. Place lights in your Walk cycle scene. Test your lights in different frames.

Sketchbook:

Read pages 59-60 of "Planning Animation". This section shows a simplified way to draw the arms and rib cage. Find a park or other place where people play (sports, frisbee etc) and draw their poses, trying to apply the ideas from the book. Minimum of 8 sketches.

Weds 10/24

IN CLASS:

IN CLASS:

Review lighting & rendering topics

Adding an image plane to your animation

A little bit about Maya cameras

ASSIGNMENTS

Due on Mon 10/29

Graded Assignment:

Finish your Walk cycle animation, add lights and shadows and make it look good. Turn your scene rendered and polished.

Readings: pages 118-131 of of the Animator's Survival Kit

Personality Walks

Now that you learned about basic walks, we will try to infuse our walks with personality and character. There are many ways to do this, but i like to think of it in three layers:

- body type: is your character a man or a women? fat or skinny? Tall and long legged or short and bulky? Maybe he or she has a limp? Each one of these possible body types will walk in different ways, because body type greatly determines how someone wealks.And body type is certainly a great way to start thinking about chartacter.

- personality traits: you can then think of what is the overall personality of your character: shy? obnoscious? proud? Each one of these personality traits can be expressed in the way the character walks

-mood: how is your character feeling today? Happy? Sad? Excited? Discouraged? Suspicious?

Combining body type, personality traits and mood can give you a great challenge. And, of course, we like to always think of the context. Start by thinking of a character and its body type and personality traits; then think of a context or background story for the walk, and that will give you the mood.

As always, observation and creativity go hand and hand to create excellent animation. Good luck!

Mon 10/29

IN CLASS:

Screen and critique final basic walks

NEW TOPIC:

Personality Walk

What we need to think about;

Elements of planning (video reference, planning on paper, research)

ASSIGNMENTS

Due on Weds 10/31

Hands-on Practice

1. Prepare and research for your character walk:

- think of a character and a context for the walk;
- write a paragraph describing your character and context for your scene. We are particularly interested in personality traits and situations that inform the way the character walks
- shoot video reference for your walk. make sure to shoot your video at 24fps
- analyse your video and plan your shot on paper
- for next class upload all of the above to synsketch before class starts

Readings: pages 135-175 of the Animator's Survival Kit

Weds 10/31

IN CLASS:

Review proposals for personality walk - videos and character descriptions
Students should re-shoot personality walk, or re-write descriptions if revisions are needed before starting animation

ASSIGNMENTS

Due on Mon 11/05

Hands-on Practice

1. First pass blocking for personality walk

Set main poses for legs, hips and spine (hide arms please)

Attention to hip movement, timing and pacing, size of stride and step, and weight shifts

Sketchbook:

Read pages 62-64 of "Planning Animation". Have some fun drawing your own simplified characters. Use your imagination! Minimum of 8 sketches.

Mon 11/05

IN CLASS:

Review personality walk first blocking pass

ASSIGNMENTS

Due on Weds 11/07

Hands-on Practice

Work on your personality walk and bring both your Maya scene and playblast for review every week in class. Improve your blocking pass and add more detail. Make sure the foot is flexible, and add overlapping on toes, and work on the “peel off” of the feet from the floor (if it applies to your walk). Improve blocking of hips and torso.

Readings:

Weds 11/07

IN CLASS:

1. Review second pass of blocking;
2. Explain what we will need for the final class reel:
Reel format and requirements
Title card
Which assignments to add
Class reel is due on finals: 12/17 (Monday) 8:30 to 9:30am

ASSIGNMENTS

Due on Weds 11/14

Hands-on Practice

Finish blocking and start working on your polishing pass. Add arm animation. If your character is holding any props, add props. If you want, add a costume (using a texture file).

Please note that

MONDAY 11/12 is a HOLIDAY - no class.

Sketchbook:

Read pages 65-68 of "Planning Animation". This section is about center of gravity and weight distribution. It is important to be aware of them when drawing/planning for animation! Look for pictures with interesting weight distribution and draw them marking where the center of gravity is in each drawing. Minimum of 8 sketches.

Weds 11/14

IN CLASS:

1. Review first pass polishing pass
2. Work in class on polishing the walk

ASSIGNMENTS

Due on Mon 11/19

Hands-on Practice

From now on, work on polishing your personality walk and bring both your Maya scene and playblast for review every week in class. Add clothes to your character if needed. Work on your lighting in preparation for rendering. This assignment is due in FINALS.

Sketchbook:

Read pages 71-75 of "Planning Animation". This section is about line variation and quality of line. Use these ideas to sketch people or objects in movement (car moving fast or breaking for example, a toaster falling, a cookie jar exploding!) Minimum of 8 sketches.

Mon 11/19

IN CLASS:

1. Review second pass of blocking;
2. Explain what we will need for the final class reel:
Reel format and requirements
Title card
Which assignments to add
Class reel is due on finals: 12/17 (Monday) 8:30 to 9:30am

ASSIGNMENTS

Due on Mon 11/26

Hands-on Practice

Finish blocking and start working on your polishing pass. Add arm animation. If your character is holding any props, add props. If you want, add a costume (using a texture file).

Please note that

MONDAY 11/12 is a HOLIDAY - no class.

Weds 11/21

THANKSGIVING WEEKEND - no Class

Mon 11/26

IN CLASS:

1. Review personality walk

ASSIGNMENTS

Due on Weds 11/28

Hands-on Practice:

1. Work on personality walk
2. Review old assignments for final class reel

Weds 11/28

IN CLASS:

1. Review personality walk

ASSIGNMENTS

Due on Mon 12/03

Hands-on Practice:

1. Work on personality walk
2. Review old assignments for final class reel

Mon 12/03

IN CLASS:

1. Review personality walk

ASSIGNMENTS

Due on Weds 12/05

Hands-on Practice:

1. Work on personality walk
2. Review old assignments for final class reel

Weds 12/05

IN CLASS:

1. Review personality walk

ASSIGNMENTS

Due on Mon 12/10

Hands-on Practice:

1. Work on personality walk
2. Review old assignments for final class reel

Mon 12/10

IN CLASS:

Last day of class.

ASSIGNMENTS

Due on Weds 12/17

Hands-on Practice:

1. Prepare final class reel.

Assignments that should be in your final class reel:

1. title card with your name, course number, semester and year
2. rolling ball
3. bouncing ball in place with squash and stretch
4. bouncing ball across the screen with squash and stretch
5. heavy and light bouncing ball
6. pendulum swing in place
7. pendulum swing with side translation in the beginning
8. ball with tail
9. vanilla walk
10. personality walk

2. Prepare a PDF portfolio with all your sketch assignments

Mon 12/17

FINALS

FINAL CLASS REEL

Due today 12/17

1. Assignments that should be in your final class reel:

1. title card with your name, course number, semester and year
2. rolling ball
3. bouncing ball in place with squash and stretch
4. bouncing ball across the screen with squash and stretch
5. heavy and light bouncing ball
6. pendulum swing in place
7. pendulum swing with side translation in the beginning
8. ball with tail
9. vanilla walk
10. personality walk

2. A PDF portfolio with all your sketch assignments