

COURSE INFORMATION:

Thursday 01:10PM - 06:10PM, Auditorium, Room 525

Instructor email: gkaments@risd.edu

Class Website: Pixeltoon.com

In addition to computer assisted animation (using a computer to shoot and playback drawings or stop motion) computers are very useful for the following:

- Generating Graphics in 2D and 3D space
- Generating Sound
- Interpolating graphic change over time; position, shape, color, direction...
- Analyzing data to create movement; Sound, motion, numerical
- Duplication
- Time shifting

This course explores the use of the computer to create animation and motion graphics. Emphasis is placed on producing dynamic movement using key-frame interpolation and vector graphics. In addition, students will work with sound and motion data, coded expressions and effects generators to expand the range of animation possibilities. Through a series of individual and group experiments, students will explore and experiment with computer animation techniques and gain experience with digital tools. A range of films will be screened complementing each week's focus.

Time outside of class will be spent working on a range of short film assignments. In addition, students will view online tutorials and explore a range of on-line resources as per individual interests.

REQUIREMENTS:

1. Come to each and every class on time.

- Instructions are given at the beginning of the class.
- Absences WILL affect your overall grade. Any student missing more than 2 classes will not be able to complete the course
- If you are sick, email me no more than 24 hours after missing class. The course is packed with projects, and it is extremely important that you don't fall behind. It is required that you contact me for missed assignments and materials.

2. Complete all projects and assignments on time. Late projects will lower your grade.

3. Read all handouts and store them in a single folder/binder for future reference.

4. Complete and practice along with all assigned tutorials on Lynda.com

5. When completed, all projects should be transferred as compressed h264 .mov files to our class folder on the workstation in Room 422 before class start time.

6. You must have all work compressed and saved in a folder to hand in for review. Make sure to save and back up all files. In order to pass the class you need to have all projects: exercises and assignments!

DO EASY: ORGANIZING, NAMING BACKING UP YOUR PRECIOUS DIGITAL WORK.

Now is the time to get into the habit of archiving and preserving your files. We will be working with Software that requires well-organized file structure. Animation is time consuming, we spend countless hours manipulating and creating digital files. It's all just ones and zeros. Once it's gone, it's gone!

Here's how to do easy:

1. Develop a naming convention for files and folders. I use a system called "camel case" (it has humps), here's an example:

barbershopSc01_background01.2.psd

In this system I start with the title of the film followed by scene number, component, version number ending with the file type. Note that with single digits, always start with a zero. Computers are dumb, they don't understand the difference between, 1 and 12. They do understand the difference between 01 and 12.

It's not important that you use this system, it is important that you develop a system and stick to it.

2. When exporting or compressing files always save your full size uncompressed file and name compressed files accordingly. Do this for single image and mov files.

barbershopF.mov
barbershopC_h264.mov

3. Save, save, save, backup, backup, backup. Desktops are erased, laptops are dropped, stolen and borrowed and lost by well meaning friends and lovers. At a minimum, keep a hard drive in a safe place with copies of all your files. If possible use a "cloud" service for additional backup.

4. Keep your directory structure intact and organized. Before starting a project create the directory structure and keep everything in place. Programs such as Premier are not happy when files are moved around. Here's a system one might use for a complete film:

Top Directory: Class Name

Sub- directory: Project Name

Sub- directory: Animatic, development, production

Sub-sub-sub directories (in each of the above levels) : Reference, Text, Ae, Fla, Stills, Image Sequence, Exports

GRADING

You will be graded on the following objectives this semester:

60% Class Projects:

- Completion of assignments on time and according to requirements
- Creativity and concept
- Effective execution, technical proficiency, craftsmanship and quality of animation
- Work demonstrates an understanding of concepts as presented in class
- Work demonstrates an understanding of equipment and software used for production
- Overall effort and commitment throughout the process

25% Final Project & Presentation: Attendance is required at the Final Critique to receive full credit for your project.

15% Class Participation: class discussion and critique involvement

ASSIGNMENTS:

We will be working on the following projects and experiments in this class:

- Interpolating Movement over Time
- Repetition and Loop
- Digital Puppet
- Expressions and Visual Music
- Motion Tracking
- Final Project

Assignments are password protected, to view online use the password "frida"

RECOMMENDED BOOKS & WEBSITES

Links to sites for inspiration and information will be found on the class website: pixeltoon.com

CLASS ONE: FEBRUARY 18

Overview of course and syllabus, After Effects Interface and Fundamentals

- **Tech:** AE interface, Interpolating change over time: position, rotation and scale.
- **Experiment:** Explore AE interface, experiment with key-frames
- **Screening:** Overview of various computer animation techniques

- **Homework:** Complete a simple 10-second animation with 3 changes over time.
- **Tutorial, Lynda.com:** *After Effects Apprentice 02: Basic Animation*, complete tutorial.

CLASS TWO: FEBRUARY 25

Review 10-second animations, animation fundamentals, physics of motion & Computer Animation.

- **Tech:** Key-frames and motion paths, motion graph and easing
- **Experiment:** Working with basic shapes, students will animate three falling objects; a bouncing ball, snowflake and object of their choice. Work will start in class and be presented the following class.
- **Screening:** Dynamic movement

- **Homework:** Complete Project 1.0
- **Tutorial, Lynda.com:** *After Effects Apprentice 14:* Shape Layers Chapter 1: Drawing Shapes. Experiment with drawing shapes in After Effects.

CLASS THREE: MARCH 3

Critique Project 01. Interpolating change over time part II: line, shape and color.

- **Tech:** Understanding instances, nested comps, shape layer exploration, repeater.
- **Experiment:** Work with a single shape and create multiple instances and loops.
- **Screening:** Repetition, Loops and Visual Music

- **Homework:** Working with a single shape layer, create a 5-10 second looping composition based on multiple instances of that single shape. Create two additional compositions following the same guidelines. All three compositions should loop smoothly.
- **Tutorial, Lynda.com:** *After Effects Apprentice 07:* Parenting Chapter 1 and Chapter 2

CLASS FOUR: MARCH 10

Critique Project 2.0 Parenting, Introduce project 3.0 Digital Puppets

- **Tech:** Parenting basics
- **Experiment:** Make a simple puppet arm connected to a body and null object. Experiment with animating.
- **Screening:** Digital Puppets.

- **Homework:** Prepare Photoshop or Illustrator puppet parts for next class. Create Storyboard. Project will be due March 19
- **Tutorial:** *After Effects Apprentice 13,* Chapter 7: The Puppet Tool.

CLASS FIVE: MARCH 17

In-class work session, review storyboards and puppet designs.

- **Tech:** Discussion of IK and Puppet Tool, Time remapping
- **Screening:**

- **Homework:** Continue work on puppet animation

CLASS SIX: MARCH 24

In-class work session, experimenting with effects

- **Tech:** Introduction to effects, play and experiment
- **Experiment:** Working with Solid Layer, create three variations based on a combination of given effects.
- **Screening:** Focus on Particle Generators, Video Projection and mapping
- **Homework:** Complete Puppet animation for next class.
- **Tutorial:** *Getting Started with After Effects Expressions*, (with Angie Taylor) , Chapters 1-3

CLASS SEVEN: APRIL 7

Critique Puppet Project 03. Expressions I, Intro; Visual Music Project 4.0

- **Tech:** Expressions; Value, Time, Behaviors, Linking Expressions, Controllers. Convert Audio to Key-frames.
- **Experiment:** Find a short sound clip and experiment with Audio to Key-frames
- **Homework:** Create an animated visual music piece, Due April 14
- **Tutorial:** *Getting Started with After Effects Expressions*, (with Angie Taylor). Chapter 7; Reacting to sound.

SPRING BREAK MARCH 31, NO CLASS

CLASS EIGHT: APRIL 14

Expressions part II, continue work on Visual Music Projects.

- **Tech:** Expressions; Working with random generators, wiggle and waveforms, generating sound from animation, code hacks
- **Experiment:** Generate animations based on wiggle expression and code hacks. Lets see what we can come up with!
- **Screening:** Visual Music
- **Homework:** Complete Visual Music Project for screening

CLASS NINE: APRIL 21

Critique Visual Music Project 4.0. Analyzing movement to create animation

- **Tech:** Motion tracking
- **Experiment:** Students pair up, each student takes video of other student moving while holding a blue tennis ball (use green screen or white wall) Create short animation working with tracking data. Focus on expressive movement.
- **Screening:** TBD
- **Homework:** Complete Motion tracking experiment for next week.
- **Tutorial, Lynda.com:** *After Effects Apprentice 11: 3D Space*, Chapters 1-3

CLASS TEN: APRIL 28

View Motion Tracking Experiments, 3D Space part I, introduce final project;

- **Tech:** 3D Space Part 1: The Z Factor, animating 2D layers in 3D space, 3D views
- **Experiment:** Play with setting up and animating elements in 3D space.
- **Screening:** Focus on Motion Graphics
- **Homework:** determine direction for final project, experiments, storyboards due next class
- **Tutorial, Lynda.com:** *After Effects Apprentice 11: 3D Space, Chapters 4-6*

CLASS ELEVEN: MAY 5

Final Project first week check in, working with 3D Space part II

- **Tech:** 3D space part 2: Working with cameras, camera rigs and camera expressions.
- **Experiment:** Working with a set of graphic elements and camera, create a camera move creating a feeling of deep space.
- **Screening:** 3D Animation Pioneers
- **Homework:** Continue work on final projects. Review resources based on interest.

CLASS TWELVE: MAY 12

View Rough cuts final project, class critique and feedback

- **Homework:** Complete Final for review on May 26

READING PREPERATION DAY MAY 19th NO CLASS

REVIEWS: MAY 26

Critique Final Projects