

# Introduction to the Principles of Animation

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## Office Hours

Tues: 10 - 11:30AM  
Wed: 10 - 11:30AM  
Thur: 10 - 11AM  
Fri: 11 - 12PM

## Class Times

Friday (Room CM110)  
1:00 - 2:50p.m. - *Lecture*  
3:00 - 4:45p.m. - *Lab*

## Course Description

This course introduces students to the animation industry; including a historical perspective, industry overview and the principles and theories that guide animation. The principles of animation are emphasized through a series of lectures, hands-on activities and group projects. Students learn the animation production process with traditional 2D tools and industry leading techniques. By the end of the course, students will be able to create 2D animations using traditional animations tools, demonstrate an understanding of the computer animation process and recognize and articulate the principles of animation.

## Goals

In the early 20th century, the motion-picture film industry exploded onto the screen. For the first time, cinematic images from around the world dazzled movie-goers and transported their imaginations to far-off distant lands and embarked on exciting adventures and stories. The animation industry was born from this passion to communicate new stories, new ideas and experiment with new forms of art.

This course will embark on our own journey of imagination and discovery. We will look into the past and learn how the fathers of animation invented an industry and study then current trends that are pushing the art of animation into the 21st Century.

Good stories are hard to find and good characters are even harder! Through-out our journey, we will study the creation of animated stories and the genesis of their imaginative characters. Without the emotion, compassion and personality of a good story and fantastic character design, Mickey Mouse, Bugs Bunny and Shrek would just be a pile of lifeless drawings.

## Objectives

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Unlike goals, objectives are supposed to be measurable. Here's what you will have to do to pass with course with flying colors:

- Create 2D animations using the personal computer
- Recognize and articulate the principles of animation
- Apply sound effects and/or music to your animations
- Demonstrate an understanding of the concept of timing and spacing
- Create poses for characters that depict, illustrate and communicate a "mood"
- Create storyboards of an original story for use in an animated project.
- Constructively critique animations of your classmates
- Demonstrate an understanding of the different careers in animation

*\*\* Students with prior training will be assigned more advanced projects \*\**

## Text and Materials

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### Required Text:

Animator's Survival Kit by Richard Williams  
ISBN: 978-0571202287

### Recommended Text:

The Illusion of Life, Disney Animation  
ISBN: 978-0786860708

## Required Materials:

- USB Flash Drive (at least 128mb) for homework assignments
- Sketch Pad

## Class Policies

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- Please arrive and conduct yourself in a professional manner.
- Please show up to class on time.
- At the beginning of each class, there will be an attendance sheet for you to sign next to your name. If you miss **THREE OR MORE** classes, and have not discussed these absences with me, I may drop you from the class.
- Please do not bring guests to class unless prearranged with the instructor.
- Contact the instructor in advance to make appropriate arrangements for missing a class and lesson.
- The student is responsible to learn the assignment and/or information if a class/lecture is missed.
- **NO** active cellular phones/beepers (turn the ringers OFF) in class or lab.
- Please raise your hand to ask questions or speak up if I'm not looking!
- Feel free to tape record lectures, but your recording device must be compact and you must come to class early enough to set it up without disturbing the class—do not bring in your boom box to record lectures and do not interrupt the class to set up your recorder.

**If you miss **THREE OR MORE** classes, and have not discussed these absences with me, I may drop you from the class.**

# Evaluation

Grades are compiled from the following:

	Ind. Value	Opportunities	Total
<b>Class Participation</b>	10	15	150pts
<b>Weekly Assignments</b>	50	13	650pts
<b>Lab Assignments</b>	25	13	325
<b>Final Project</b>	250	1	250pts
		<b>Grand Total =</b>	<b>1375pts.</b>

All assignments are due at the beginning of class. The first 15 minutes of class will be devoted to turning in assignment, unless otherwise noted by the instructor. All assignments must be physically turned into the instructor during class. Assignments handed-in after class will be counted as "Late".

**\*\* Assignments CANNOT be emailed to the instructor\*\***

## Late Assignments

- One Class = One Letter Grade
- Two Classes = Two Letter Grades
- Three or more classes = the assignment will not be accepted

Only extreme circumstances warrant a grade of "incomplete". An incomplete grade is reserved for those students who meet all of the following criteria:

- Student experiences an extreme situation which is unexpected (Such as a death in the family, serious illness requiring the student to miss several classes)
- Student's grades are passing ( C or higher) at the time of the extreme situation.
- Student notifies the instructor within 10 days of an extreme situation

**\*\* A home computer crash is not an acceptable excuse\*\***

## **Academic Dishonesty**

Students are expected to maintain the highest standards of academic honesty while pursuing their studies at Sacramento City College. Academic dishonesty includes but is not limited to: plagiarism and cheating; misuse of academic resources or facilities; and misuse of computer software, data, equipment or networks.

Plagiarism is the use (copying) of another person's ideas, words, visual images or audio samples, presented in a manner that makes the work appear to be the student's original creation. All work that is not the student's original creation, or any idea or fact that is not "common knowledge," must be documented to avoid even accidental infractions of the conduct code.

Cheating is to gain unfair advantage on a grade by deception, fraud, or breaking the rules set forth by the instructor of the class. Cheating may include but is not limited to: copying the work of others; using notes or other materials when unauthorized; communicating to others during an exam; and any other unfair advantage as determined by the instructor.

## **Disability Policy Statement**

It is our policy not to discriminate against qualified students with documented disabilities in our educational programs, activities, or services. If you have a disability-related need for adjustments or other accommodations in this class please contact the Disabilities Resource Center. You must inform your instructors and the Disabilities Resource Center before the end of week one of classes and preferably before the class start.

## **Desire to Learn (D2L)**

This class will utilize Desire to Learn, our online learning resource system. Assignments, grades, rubrics and class materials will be placed in our class's D2L website. Please bring your student ID number and password to class each session. We will be actively using this platform for this class.

# Advanced Technology Lab Hours and Information

**Lab Location:** T109

**Lab Phone:** 916-558-2277

**Lab Schedule:** The Lab is open 6 days a week, during the following hours:

Monday - Thursday: 8:00 AM - 9:00 PM

Friday: 11:00 AM - 5:00 PM

Saturday: 1:00 PM - 5:00 PM

Sunday: Closed

The computer lab is equipped with Apple iMac computers and are loaded with the latest software. They are for you to use for class projects —please treat them with respect. Every time you use the computer lab you **MUST** sign-in at the computer near the door using your student ID number. The lab attendance records generate funds for new equipment and software. The lab coordinators and tutors are available for assistance if you are experiencing difficulty with the homework.

They have been asked **NOT** to hand-feed you answers. They are there to help you learn and remember the material. There should always at least one lab employee close by to help you, but do not use the help as a crutch or you will not learn the material. I also recommend that you bring your text book to the lab as reference material, especially during busy hours when one-on-one help is harder to get.

## A New Greener Approach

The GCOM Department at SCC recently became the first community college in the U.S. to join the Designers Accord—an international coalition of designers, educators, researchers, engineers, business consultants, and corporations, who are working together to create positive environmental and social impact. As part of GCOM’s effort, we are planning to implement more “sustainable” practices in the way we teach and run our program.

For more info on the Designers Accord, visit [www.designersaccord.org](http://www.designersaccord.org)

Most lesson assignments will come from the textbook and any extra instructions will be detailed on the class blog. As much as possible, any additional assignments and handouts will be available only as PDF files on the blog and **NOT** be handed out in paper form in the classroom. You are

encouraged to NOT print out these files, but to read them and keep them in digital form only.

## Online Resources

SCC Website: [www.scc.losrios.edu](http://www.scc.losrios.edu)

Desire 2 Learn: <https://d2l.losrios.edu/>

GCOM Department Website: [http://wserver.scc.losrios.edu/~tech/gc/gcom\\_home.html](http://wserver.scc.losrios.edu/~tech/gc/gcom_home.html)

GCOM Blog: <http://gcomscc.blogspot.com/>

Class Website: [www.renderography.com](http://www.renderography.com)

Adobe's Website: [www.adobe.com](http://www.adobe.com)

Autodesk Website: [www.autodesk.com](http://www.autodesk.com)

Luxology Website: [www.luxology.com](http://www.luxology.com)

Academic Software: [www.journeyed.com](http://www.journeyed.com)

# Calendar of Assignments

## January

Due Date	Assignment
1/25/13	Bring D2L Log-In Info

## February

Due Date	Assignment
02/01/13	Student Survey
02/08/13	Bouncing Ball
02/22/13	Pendulum Swing

## March

Due Date	Assignment
03/01/13	Coin Twist
03/08/13	Goldilocks
03/15/13	Arm Swing
03/22/13	Walk Cycle - Legs

## April

Due Date	Assignment
04/05/13	Walk Cycle - Arm
04/12/13	Walk Cycle - Distance
04/19/13	Run Cycle
04/26/13	Jump

## May

Due Date	Assignment
05/03/13	Arm Slap
05/10/13	Final Project



# GCOM 400 PROJECTS

## BOUNCING

### BALL

Due: Week 03

#### *Skills Learned*

- Learning the Animation Process
- Intro to Drawing
- Basic Animation
- Setting Keyframes
- Working on the timeline
- Principles of Animation: Arcs

## PENDULUM

### SWING

Due: Week 04

Ch. 3

#### *Skills Learned*

- Principles of Animation: Spacing
- Consistent Drawing
- Animating Colors and Effects
- Creating and animating shapes
- Duplicating Objects
- Understanding Motion Paths

## COIN

### TWIST

Due: Week 05

Ch. 4

#### *Skills Learned*

- Creating Custom Shapes
- Customizing a Shape's Fill and Stroke
- Animating Shapes
- Working with Audio

## GOLDILOCKS

### *Skills Learned*

Due: Week 06

- Principles of Animation: Overlapping Action
- Adding Character
- Animating Multiple Layers
- Editing Masks
- Creating Compound Paths
- Understanding Transparency

## ARM SWING

### *Skills Learned*

Due: Week 07

- Principles of Animation: Arcs, Spacing, Squash and Stretch
- Duplicating animations
- Working with Photoshop files
- Duplicating animations
- Working with imported Photoshop layer styles
- Exporting video

## WALK CYCLE

### *Skills Learned*

## LEGS

Due: Week 08

- Walk Cycle Body Mechanics
- Spacing and Timing
- Parenting
- Nesting Compositions
- Anchor Points and Rotation
- Importing Photoshop Files

## WALK CYCLE

### ARMS

Due: Week 09

#### *Skills Learned*

- Walk Cycle Body Mechanics
- Spacing and Timing
- Parenting
- Nesting Compositions
- Anchor Points and Rotation
- Importing Photoshop Files

## WALK CYCLE

### DISTANCE

Due: Week 10

Ch. 8

#### *Skills Learned*

- Creating Depth and Distance
- Defining areas of overlap
- Establishing the Vanishing Points
- Creating smooth motion in animation

## RUN CYCLE

Due: Week 11

Ch. 09

#### *Skills Learned*

- Principles of Animation: Anticipation
- Extracting foreground objects
- Using Adjustment Layers
- Creating Freeze Frames
- Creating creative effects

# JUMP

Ch. Week 12

## *Skills Learned*

- Creating and Animating Lights
- Creating and Animating Cameras
- Manipulating in 3D Space
- Universal Camera Tool
- Combining 2D and 3D layers
- Pre-Composing

# ARM SLAP

Due: Week 13

## *Skills Learned*

- Principles of Animation: Overlapping Action
- Using Levels to correct colors
- Using Auto Levels
- Applying Color Range
- Removing unwanted elements with the Clone Stamp

# FINAL

## PROJECT

Due: 5/22/13

## *Skills Learned*

- Principles of Animation
- Compositing
- Storytelling
- Production Elements