

ARTC 2331/CSAT 2312: INTRODUCTION TO ANIMATION

2–4.50pm (CSAT: 3.15pm), Monday and Wednesday | Jan–May, 2020 | Room BAB 303, Sul Ross State University
Avram Dumitrescu adumitrescu@sulross.edu 432-837-8380 (office): FAB 07
Office Hours: MW 10-10.55am TR 9-9.25am, and by appointment

Course Introduction

This class will teach you the basics of animation using many examples, projects, and on-hand instruction. Animations will be created on *OpenToonz* and you will work with Wacom Intuos tablets. We will also briefly look at a selection of historically important animations. The skills you develop over the semester will go towards the creation of a **15-second** animation of your own choosing.

Learning Objectives

During this semester you will:

- Learn key concepts of animation through many exercises and examples
- Understand how to add life and character to your creations
- Gain knowledge of how to use *OpenToonz* to animate digitally

Grading and Evaluation

Grading will be based on the class projects, a final project, attendance and participation in discussions and critiques, and a final animation. ARTC students will also have a class presentation to create and show. All assignments will be evaluated for effort, execution, and presentation.

You will be graded from 0-100% for every project. No extra credit projects will be offered.

Please note that work submitted **no later** than the beginning of class, the day of the deadline, will be graded. **Any work submitted *one minute* past the beginning of class will be awarded a zero. There are no exceptions to this rule.**

Your final class grade will consist of:

- Various animation projects : 60%
- Book Quiz : 5%
- Attendance and participation : 20%
- Final Project : 15%

Final Examinations

You must turn up to the final examination. If you do not, your overall class grade will drop an entire letter.

Materials and Text

- *The Animator's Survival Kit* – choose one version below
 - iOS edition - <https://itunes.apple.com/us/app/the-animators-survival-kit/id627438690?mt=8>
 - Print edition - *The Animator's Survival Kit-Revised Edition* by Richard Williams. ISBN: 086547897X
- 4GB (at least) jump/flash drive

You must have your textbook in class by the date in the calendar because we will have a book quiz that day. I highly recommend the iPad edition of *The Animator's Survival Kit—Expanded edition*. While a little more expensive, it includes many animated examples that will allow you to more easily understand the concepts in the book. The physical copy of the book should be available from the Sul Ross bookstore or can be bought from an online store, such as www.amazon.com.

A jump-drive is essential for saving your work but you are also expected to back up your projects to another location, such as at a free service like www.dropbox.com or www.google.com/drive. *Not submitting a project because you lost your jump-drive or some other technical difficulty will not be accepted as an excuse and will earn you a zero for that project.*

Software and hardware availability

The BAB labs have Wacom tablets you can use during class, and outside of class (though they must not leave the lab). Any modern graphics tablet should work with your software, however. *OpenToonz* is the free, open-source software we will be using for the semester, which is available on the computers in BAB 302 and BAB 303. You can also download it from here: <https://opentoonz.github.io/e/>

Rules and expectations

Attendance is **compulsory**. If you must miss a class for a school-related activity, the absence must be discussed (and arrangements made regarding coursework) **prior to the absence**. If you must miss a class for an emergency or illness, please contact me **by email or phone as soon as possible**. Six (6) absences result in you being dropped from the course with a grade of “F” as per Sul Ross State University policy. Five (5) unexcused absences will result in a zero for your attendance and participation grade. Arriving to class **on time** is also essential – **arriving late more than two times will be counted as one absence. Lateness is considered 15 minutes after the beginning of class.**

Please note that an absence is 50-minutes, not one class period. Below is a guide to how much each absence impacts your attendance and participation grade.

- | | | | |
|---------------------------------|------|--------------------------------|--------|
| • One (1) unexcused absence: | -20% | • Four (4) unexcused absences: | -80% |
| • Two (2) unexcused absences: | -40% | • Five (5) unexcused absences: | - 100% |
| • Three (3) unexcused absences: | -60% | • Six (6) unexcused absences: | FAIL |

No cell phone usage. No social-networking websites. No instant-messaging. No checking personal emails. Headphones and earbuds are allowable **ONLY** when you are working, but not when the professor or a fellow student is speaking. **Doing any of these, or anything I consider disruptive to the class, will drastically drop your attendance and participation grade. You may be also asked to leave the class and will be marked absent for that day.**

Late work will not be accepted.

Plagiarizing, cheating, or any other dishonest behavior in the classroom will not be tolerated. Rules and regulations regarding plagiarism, dishonesty, and other issues concerning classroom participation can be found in University Rules and Regulations and Student Handbook. This course will abide by these established policies. A student found to be engaging in these activities will be penalized to the full extent of Sul Ross State University policy.

Email

You are expected to check your email account **EVERY** day. This is the account that is registered at Blackboard, and is usually your Sul Ross email account.

ADA Needs

It is Sul Ross State University policy to provide reasonable accommodations to students with disabilities. If a

student would like to request such accommodations because of a physical, mental, or learning disability, please contact the ADA Coordinator in the Ferguson Hall, room 112 or call (432) 837-8691. Please relate all requests for special accommodations to the instructor by the third class period.

SLOs

1. Students will expressively communicate an original idea or concept visually through an original artwork.
- 3d. Students with a concentration in Digital Art will be able to demonstrate knowledge and familiarity of digital image creation and knowledge of professional practices in digital art.
 - a. Demonstrate the ability to produce a cohesive professional thematic capstone project which is well crafted and has a defined technique or personal style.
 - b. Demonstrate technical mastery of digital skills as they apply to the selected media.
 - c. Ability to produce a professional portfolio that meet current industry standards.
 - d. Ability to work in a timely manner.

Marketable Skills

1. Solving problems though critical thinking.
2. Creating ideas with independence of thought.
3. Communicating professionally through written and spoken presentation.

Exam

Missing the exam at the end of the semester will result in your final score dropping an entire letter grade for the class.

Please note that this syllabus is subject to change.

COURSE SCHEDULE

DATE	IN CLASS	NEXT CLASS
Jan 13 (M)	Class introduction and syllabus review	ORDER/BUY TEXTBOOK TODAY!
Jan 15 (W)	Set up a free Google account so that you can upload animations to YouTube.com PRESENTATION: Rapid survey of the history and forms of animation PRESENTATION: The 12 Principles of Animation	Read either pp35-45 from the textbook or chapter 3 (<i>It's all in the timing and the spacing</i>) from the app. Please bring a notebook and pen to next class so you can record how to use OpenToonz.
Jan 20 (M)	Martin Luther King Day	
Jan 22 (W)	Introduction to OpenToonz. Using the example of a bouncing ball, we'll explore the following: <i>Timing</i> - the action, when the ball hits the ground, where stuff happens	

	<p><i>Spacing</i> - how a small difference in position between frames suggests slow movement, and how a large difference in position suggests fast movement</p> <p>Project #1: Circle Bounce – Animate a rubber ball, bowling ball (with three holes), and a balloon (with twist at end) bouncing on its own arc. The animation must last long enough at 24 frames per second to successfully convey all three objects. ARTC Students – choose at least TWO objects to animate. CSAT STUDENTS – Choose at least ONE object to animate.</p>	
Jan 27 (M)	Project #2: Seaweed S and C curves – Animate a piece of seaweed.	
Jan 29 (W)	<p>BOOK QUIZ: You must have your app/textbook in class today</p> <p>Continue working on Circle Bounce and Seaweed S and C curves.</p>	<p>Read either pp46-69 and pp84-101 from the textbook or chapter 4 and chapter 8 (<i>Advancing backwards to 1940</i> and <i>Flexibility</i>) from the app. Do not worry about the section about x-sheets.</p>
Feb 3 (M)	<p>DUE TODAY: Project #1 Circle Bounce and #2 S and C curves</p> <p>CONCEPTS <i>Flexibility</i> - A way of making a character's movement from <i>a</i> to <i>b</i> more interesting – travel instead from <i>a</i> to <i>x</i> to <i>b</i>, making an interesting visual diversion.</p> <p><i>Overlapping action</i> – One part of your figure moves and the other parts follow. We'll look at an example of a figure of a man turning right to left and how overlapping action can make it much more interesting.</p> <p><i>Successive breaking of joints to give flexibility</i> – Bending the joint, whether or not it would actually bend in reality.</p> <p>Project #3: Flexibility - Draw a simple face going from happy to sad (or sad to happy), whilst turning. Draw 10 different breakdowns, resulting in 30-drawings (10 happy, 10 sad, 10 in-between) ARTC - animate your favorite TWO. CSAT - animate your favorite ONE.</p>	
Feb 5 (W)	Continue working on project #3, Flexibility.	
Feb 10 (M)	<p>DUE TODAY: Project #3, Flexibility</p> <p>CONCEPTS <i>Extremes</i> – The main drawings in an animation sequence. <i>In-betweens</i> – The drawings between the <i>extremes</i>. <i>Breakdown</i> – The passing position between two <i>extremes</i>. <i>Slowing in/ slowing out</i> or <i>Easing in/Easing out</i> – Nothing moves from a standstill to a top speed. Speed has to build up and slow down. <i>Key</i> – Drawings that show what's happening in the shot (similar to a comic-book frame).</p> <p>FORMS OF ANIMATION <i>Straight ahead animating</i> – “Improvisational” animation.</p>	

	<p><i>Pose to Pose</i> – Draw your keys > extremes > passing positions > in-betweens.</p> <p><i>Combination of Straight Ahead and Pose to Pose</i> – Draw your keys and extremes, but then use them as guides (Keys > Extremes > Passing Positions). Animate each part as a straight-ahead run e.g. arms and hands. Then another straight run for swinging hair, etc.</p> <p>Project #4: Keys – Create thumbnails, keys, extremes, and breakdowns for TWO simple actions. CSAT – The same for ONE simple action.</p>	
Feb 12 (W)	Continue working on project #4	Read either pp256-272 from the textbook or chapter 9 (Weight) from the app.
Feb 17 (M)	<p>CONCEPTS</p> <p><i>Weight</i> - Can be shown via anticipation. For example, animate the character questioning how to pick up a boulder. Then show the character lifting the object slowly, whilst struggling. Resistance too can determine how heavy something is.</p> <p><i>Pressure</i> - Can be visualized by how an object distorts, e.g. a finger lightly touching a wall will look mostly straight, whereas the first joint of the finger will bend under great pressure.</p> <p><i>Weight</i> - Determines how much pressure we expend to move, stop, or change the direction of an object or creature.</p> <p>Project #5: Weight - Animate two blobs jumping in the air. One blob is heavy, and the other extremely light. The animation should last at least 3-seconds at 24fps and MUST LOOP, i.e. the final frame should lead onto the very first frame.</p> <p>ARTC Students – you also must animate two more blobs describing an arc in the air (see the diagram in the Projects document) that also loop, i.e. the final frame should lead onto the very first frame.</p>	
Feb 19 (W)	<p>DUE TODAY: Project #4, Keys</p> <p>Continue working on project #5, Weight.</p>	
Feb 24 (M)	<p>Brainstorming presentation.</p> <p>Project #6: Brainstorming – Come up with 10 story ideas. More details in can be found in the Projects document.</p> <p>Continue working on project #5, Weight.</p>	Read either pp273-284 from the textbook or chapter 10 (Anticipation) from the app.
Feb 26 (W)	Continue working on project #5, Weight.	
Mar 2 (M)	<p>DUE TODAY: Project #5, Weight</p> <p>DUE TODAY: Project #6, Brainstorming</p> <p>CONCEPTS</p> <p><i>Anticipation</i> - The preparation for an action. We think of things first, and then do them.</p> <p>Any action can be enhanced if there is anticipation before the action. E.g. we go back before we go forward.</p>	Read either pp102-175 from the textbook or chapter 6 (Walks) from the app.

	Project #7 Anticipation - Create an animation showing anticipation. For example, a punch where the fist is drawn back first and then rapidly propelled forward. Or someone about to throw a ball. The animation must last between 2-5 seconds at 24fps.	
Mar 4 (W)	Continue working on project #7, Anticipation	
Mar 9-13	SPRING BREAK	
Mar 16 (M)	DUE TODAY: Project #7, Anticipation PRESENTATION: Storyboards. Project #8: Storyboards – Storyboard TWO of your ideas from Project #6. One of these will become the beginning of your final project CSAT Students – Storyboard ONE of your ideas.	
Mar 18 (W)	CONCEPTS <ul style="list-style-type: none"> ▪ <i>Walking</i> – Besides travelling, this allows you to illustrate character and emotion. ▪ Begin with three side-view drawings from which to build a walk. Two contact positions (left foot, right foot), and then the passing position/breakdown. The passing position is where all kinds of personality can be added. ▪ Character can be added with a wobble of the head, bend the body, etc. ▪ We will examine an angry walk, look at how the heel and clothes move, view how the arm can swing, and show different feelings with walks. Project #8: Walks - Use the 3-drawing system to create five different styles of walk (a total of 15 drawings). Then fully animate TWO of these. Remember to keep your figure as simple as possible. The animation must last between 2-4 seconds at 24fps and MUST LOOP .	
Mar 23 (M)	DUE TODAY: Project #8, Storyboards Continue working on project #9, Walks	
Mar 25 (W)	Continue working on project #9, Walks	
Mar 30 (M)	DUE TODAY: Project #9, Walks. Begin working on your final project	
Apr 1 (W)	Continue working on your final project.	
Apr 6 (M)	ARTC Students – Presentations are to be shown today Continue working on your final project.	
Apr 8 (W)	ARTC Students – Presentations are to be shown today Continue working on your final project.	
Apr 13 (M)	Continue working on your final project.	
Apr 15 (W)	Continue working on your final project.	

Apr 20 (M)	Continue working on your final project.	
Apr 22 (W)	Continue working on your final project.	
Apr 27 (M)	Continue working on your final project.	
Apr 29 (W)	Continue working on your final project.	
Tuesday, May 5 3-5pm	FINAL EXAM For the exam we will screen the final project animations. Upload your final animation to YouTube.com no later than 9pm, the day before the exam	

ANIMATION PROJECTS

Please note that this document is subject to change

---Project #0: Presentation (ARTC only)---

Select a professional animator and create a presentation on their career and selected filmography.

Grading

- Presentation length – minimum of twelve slides
- Areas to cover in your presentation:
 - How did this person enter the animation industry?
 - What animations have they been involved with? Focus on a minimum of **three**.
 - For each animation, orally explain...
 - Why was this animation important?
 - What was unique about it?
 - How would you describe the animation style?
 - What was successful and unsuccessful about the animation?
 - What influences has the animation had since it was released?
 - Why is this animator important to the world of animation?
 - What is their animation/design philosophy?
 - What did you learn from studying this animator that you could apply in your projects or career?
- Cite your sources. I HIGHLY RECOMMEND interlibrary loaning books that have interviews with animators.
- Video links can be problematic but GIFs can be easily inserted into your presentation to show motion

Grading

Grade breakdown:

- Aesthetics (minimal text, large images, non-pixelated images) – 40%
- Use of at least one physical book – 10%
- Research, and intelligence of arguments – 50%

Submit the essay as a PowerPoint file, no later than the start of class, the day of the deadline. Use this file format – LASTNAME-FIRSTNAME-presentation.pptx

---Project #1: Circle Bounce---

Animate a rubber ball, bowling ball (with three holes), and a balloon (with twist at end) bouncing on its own arc.

CSAT STUDENTS – Choose at least one. ARTC STUDENTS – Choose at least two.

Grading

Grading breakdown:

- Ensure the rubber ball, bowling ball, and balloon react accordingly - 80%
- The animation must last a minimum of 3 seconds at 24fps (frames per second) – 20%

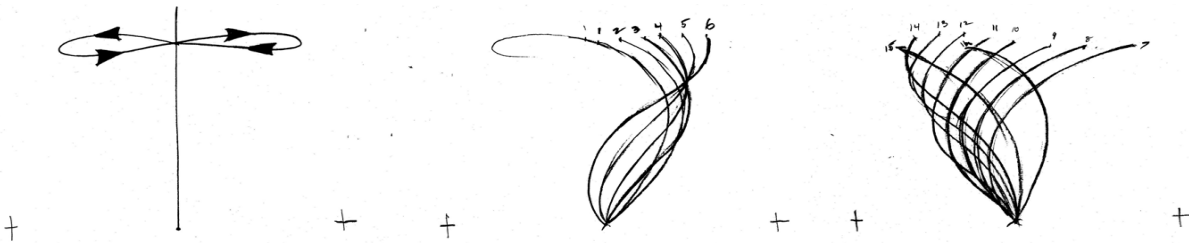
Due Date

Your animation must be uploaded to a YouTube.com account than the beginning of class, on the date specified in the calendar. Projects received after this time will receive a zero. Be sure to set the video to Public, not Private.

--- Project #2: Seaweed---

Animate a piece of seaweed that loops. Implement S and C curves when creating your lines.

Here are some guides (source: <http://gossipanimationclass.blogspot.com/2012/11/day-11-welcome-back-to-class.html>).



The image on the left gives you an idea of the path of the tip of the seaweed.

Once you have the line animating well using S and C curves, return to each frame and add detail to turn it into a piece of seaweed.

Grading

Grading breakdown:

- Animate a strong C and S curve - 60%
- Ensure your animation loops
- Add the body of the seaweed once the line is moving realistically - 30%

Due Date

Your animation must be uploaded to a YouTube.com account than the beginning of class, on the date specified in the calendar. Projects received after this time will receive a zero. Be sure to set the video to Public, not Private.

---Project #3: Flexibility---

KEY 1



KEY 2



Source: www.animatorisland.com/animation-secret-getting-there-is-half-the-fun/

Draw a simple face going from happy to sad (or sad to happy) whilst turning. Draw 10 different breakdowns and animate your favorite four (CSAT Students – two). The animation must last at least 3 seconds at 24fps.

Grading

Grading breakdown:

- Draw ten different breakdowns showing a face going from happy to sad (or sad to happy). Each should consist of three drawings, resulting in a total of thirty drawings – 50%
- Fully animate your **four** favorite transitions. Put all four onto one screen and ensure the animation lasts at least 3 seconds at 24fps – 50%

Due Date

Your animation must be uploaded to a YouTube.com account than the beginning of class, on the date specified in the calendar. Projects received after this time will receive a zero. Be sure to set the video to Public, not Private.

---Project #4: Keys, Extremes, and Breakdowns---

Create thumbnails, keys, extremes, and breakdowns/passing positions for TWO simple actions. For instance, rising up from a chair and closing a door.

- Begin by very quickly sketching out small drawings showing what will happen. Do not change the camera angle. Spend no more than 60-seconds per thumbnail sketch.
- Once you've created your thumbnails, begin drawing the keys, i.e. the storytelling positions.
- Next, begin drawing the extremes, drawings that have to be in the shot, e.g. if illustrating a walk, the contact positions where the feet touch the ground.
- Next, begin drawing the breakdowns/passing positions, things that add personality and come in between each extreme, e.g. the head bobbing up and down.
- Do not animate this any further. Instead, you are going to produce a choppier animation that runs perhaps about 4fps. As a result, you will be creating a more complicated animation than what you've so far produced.

Grading

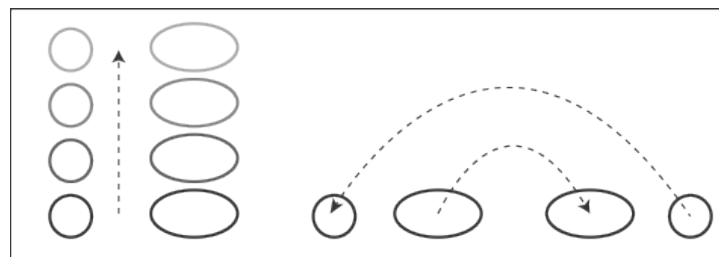
Grading breakdown:

- Provide your quick thumbnails, roughly illustrating the animations, as a series of JPEGs – 50%
- Animate the keys, extremes, and breakdowns/passing positions in Toon Boom Animate - 50%

Due Date

Your animation must be uploaded to a YouTube.com account than the beginning of class, on the date specified in the calendar. Projects received after this time will receive a zero. Be sure to set the video to Public, not Private.

---Project #5: Weight---



Animate two blobs jumping in the air. One blob is heavy, and the other extremely light. The animation must last between 3-4 seconds at 24fps and MUST LOOP, i.e. the final frame should lead onto the very first frame. (ARTC only)

Next to the two vertically jumping blobs animate a heavy blob and light blob describing an arc and then jumping back to their point of origin.

Grading

Grading breakdown:

- Animate two blobs (ARTC – two), two heavy, two light – 80%
- Ensure your animation loops SEAMLESSLY – 20%
- Make it last 3-4 seconds at 24fps.

Due Date

Your animation must be uploaded to a YouTube.com account than the beginning of class, on the date specified in the calendar. Projects received after this time will receive a zero. Be sure to set the video to Public, not Private.

--- Project #6: Brainstorming---

Come up with **ten** story ideas. Each one must last fifteen seconds. One approach to coming up with ideas is this: 1) define a character, 2) explain an objective, 3) create an impediment, and 4) show a resolution (not necessarily positive). You may also create more experimental/abstract stories.

Grading

Grading breakdown:

- Ensure each story has enough thought and effort – later this semester you will be storyboarding two of them – 100%
- Type up your ten story ideas in Microsoft Word. You must save it as a .DOC or DOCX file. **No other format will be accepted.** File format for this is LASTNAME-FIRSTNAME-10ideas.doc

Due Date

Your ideas must be emailed to adumitrescu@sulross.edu as a Word file no later than the beginning of class, on the date specified on the syllabus. Projects received after this time will receive a zero.

---Project #7: Anticipation---

Create an animation showing anticipation. For example, a punch where the fist is drawn back first and then rapidly propelled forward. Or someone going to toss a ball. The animation must last between 2-5 seconds at 24fps.

Grading

Grading breakdown

- Clearly show some kind of anticipation – 40%
- Ensure it lasts between 2-5 seconds at 24fps – 60%

Due Date

Your animation must be uploaded to a YouTube.com account than the beginning of class, on the date specified in the calendar. Projects received after this time will receive a zero. Be sure to set the video to Public, not Private.

---Project #8: Storyboards ---

Storyboard two of your ten ideas from the Brainstorming project (CSAT students – one idea). One of these will become the beginning of your final project.

- Storyboard templates will be distributed in class and you may work traditionally. Your final work must be photographed/scanned and emailed as PNGs or JPEGs.

- Begin by roughly sketching out the shots you need for your animation. At this stage you're just thinking through the camera positions and conceptualizing what's in your head.
- Next, open up *storyboard_template.psd* in Photoshop (it's located at sulross.blackboard.com). Immediately resave this file as LASTNAME-FIRSTNAME-**first-storyboard01.psd**
- In each frame begin turning your thumbnails into fully rendered storyboard panels. Add the shot number too, along with any direction notes. Arrows can help illustrate movement. You may print out blank storyboard sheets and illustrate non-digitally but remember that you will have to scan/photograph each sheet when finished.
- Illustrate EVERY important visual scene. It is vital to storyboard as much as possible as this will help you get a sense of the timing of your final animation.
- When you complete the first sheet, save it and begin a new blank sheet using the original file from Blackboard. This time call it LASTNAME-FIRSTNAME-**first-storyboard02.psd**. Repeat until you have storyboarded the entire animation.
- Repeat the entire process and this time use the following format: LASTNAME-FIRSTNAME-**second-storyboard01.psd**

Grading

Grading breakdown:

- Completely cover every single shot you need for your both pieces of animation, along with every piece of action, and any necessary notes – 60%
- Effort and care put into your art (ability to draw is not being judged, rather how clear and well thought out your illustrations are) – 40%
- Send the files to me as a series of JPEGs. The *storyboard_template* is a PSD file so use File > Save as... JPEG.

Due Date

Your storyboards must be emailed to adumitrescu@sulross.edu as a series of JPEG files no later than the beginning of class, on the date specified on the syllabus. Projects received after this time will receive a zero

---Project #9: Walks---

Use the 3-drawing system to create five different styles of walk (a total of 15 drawings). Then fully animate **two** of these (CSAT Students – one). Remember to keep your figure as simple as possible. The animation must last between 2-4 seconds at 24fps and MUST LOOP.

Grading

Grading breakdown:

- Begin by creating the five 3-drawing walk possibilities. Email these to me as a JPEG using the following format: LASTNAME-FIRSTNAME-**5walks.jpg** – 40%
- Create two fluid walk animation that look natural and loops – 40%
- Animate, at the very least, the legs, arms, and head in both walk cycles – 20%
- Turn your animation into a Quicktime movie. In *Toon Boom Animate*, choose File > Export > Movie. Save your animation using the following format: LASTNAME-FIRSTNAME-**walk.mov**

Due Date

Your animation must be uploaded to a YouTube.com account than the beginning of class, on the date specified in the calendar. Projects received after this time will receive a zero. Be sure to set the video to Public, not Private.

---Final Project---

CSAT Students - turn your storyboard into a 15-second animation.
ARTC Students - turn your storyboard into a 20-second animation.

Grading

This project will be graded from 0-100%. To do well in this project, do the following:

- Animate smoothly and consistently, i.e. elements should keep their basic shape from frame to frame – 30%
- Follow your storyboard closely – 20%
- Put a reasonable amount of effort into the project – 40%
- Ensure your animation lasts 15/20 seconds – 10%
- Sound effects/music are not necessary but will add to the overall project. This can be done in AfterEffects. Do not use copyrighted material.

Due Date

Your animation must be uploaded to a YouTube.com account than the beginning of class, on the date specified in the calendar. Projects received after this time will receive a zero. Be sure to set the video to Public, not Private.

KRITA QUICKSTART GUIDE

(taken from <https://tinyurl.com/y4t9nymw>)

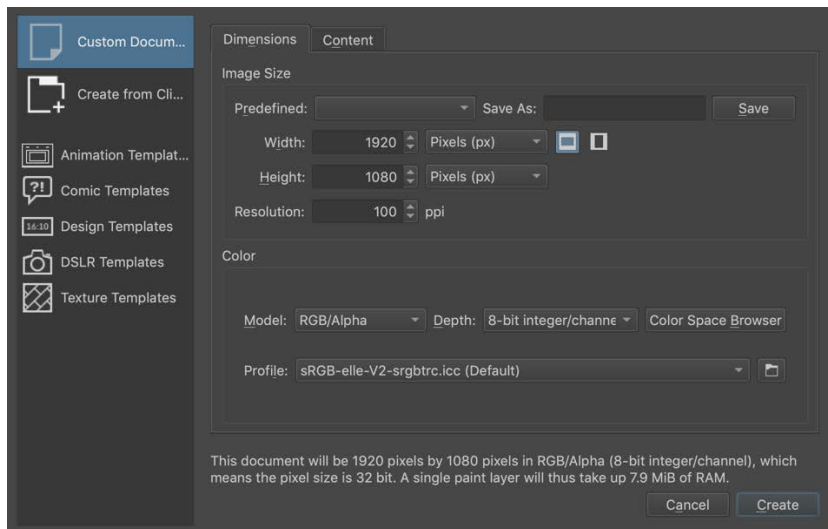
DOWNLOAD

Free download from <https://krita.org/en/>

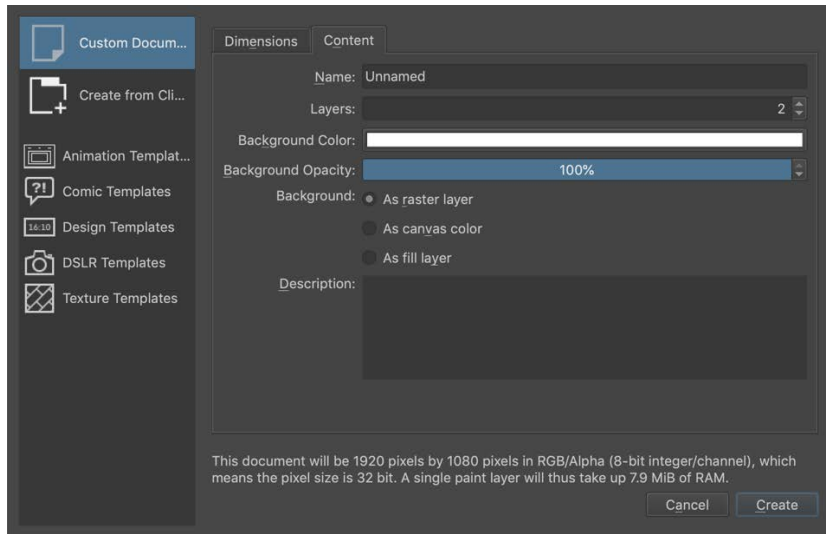
SET UP

File > New > Custom

Set up your animation template:



Switch to the Content tab in this window to name your file, choose how many layers you want to begin with, and the background color:



Access animation features: *Settings > Dockers > Animation* and then *Settings > Dockers > Timeline*

ANIMATING

Best practice when beginning a new animation is to create a new layer and draw on that. Ensure the lightbulb icon is on so that you can have onion skinning.

Draw on Frame 0.

Right-click on frame 01 and choose Create Blank Frame.

LAYERS

Right-click on the timeline to generate a new layer. If a layer does not show in your timeline, right-click on your chosen layer and “Show in Timeline”.

EXPORTING AN ANIMATION

You need to download the codec *FFMpeg* which can be found here: <https://ffmpeg.org>

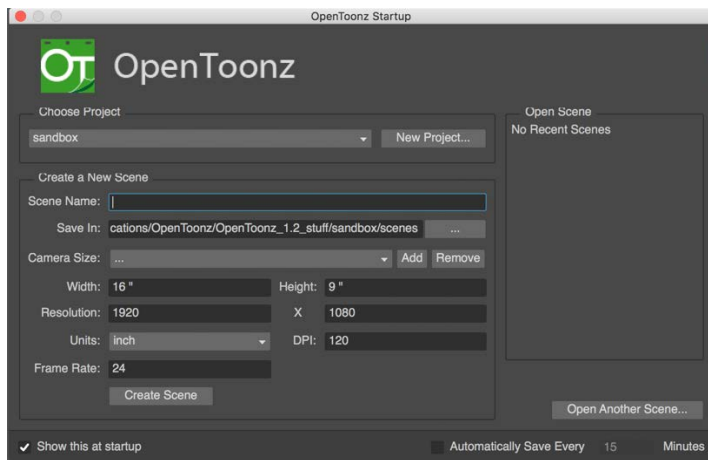
Once installed and your animation is ready, File > Render Animation

OpenToonz Tutorial

DOWNLOAD LINK

Available for free on Mac and PC: <https://opentoonz.github.io/e/>

LAUNCH



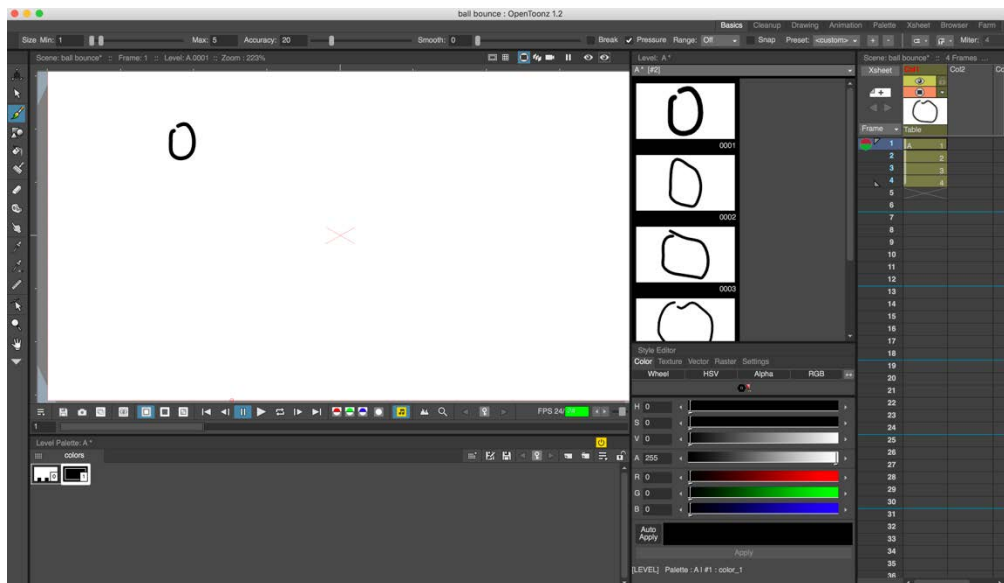
When you load up OpenToonz, this is what you see. Here are a couple of important items:

Scene Name: – This is what you'll call the project you're working on, e.g. Walks

Save In: – Where you save your project, be it on your flashdrive or desktop.

Canvas Size – this is where you can determine the size of your animation

MAIN WORK AREA



This is what you'll see most of the time you work with the software:

Canvas (left white area) – You draw here using the brush (selected in the screenshot) and can zoom using the magnifying glass.

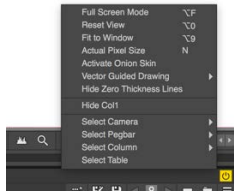
X-sheet (far right) – The green rectangles represent the animation frames.

To reorder a frame you can hold down the left mouse button and drag the frame(s) to another position.

In Col2 you can draw another layer, such as a mountain range, floor, etc., and duplicated it. Select the frame and a pill shape should appear under the frame. Drag this down and your background element will duplicate.

Should you rearrange frames and the numbers are out of order, select what you want to correct, right-click, and choose Auto-renumber.

ONION SKINNING



Onion skinning is extremely useful when animating. It allows you to see the previous frames and can help where the elements in your next frame should appear. To access it, right-click on the canvas and choose *Activate Onion Skin*.

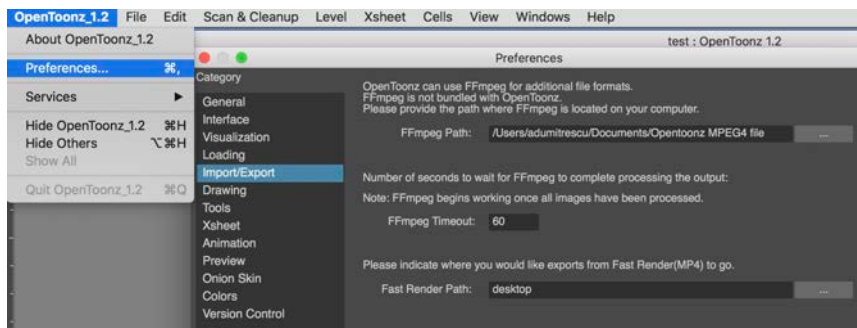
OUTPUTTING AN ANIMATION

If you are using a Mac the you may need to download the *ffmpeg* codec from <http://www.ffmpegmac.net>.

Once downloaded, go to Opentoonz > Preferences... > Import/Export and tell the software how to navigate to find the *ffmpeg* codec by clicking on the triple dots and selecting the folder it lives in (mine is in “Opentoonz MPEG4 file” which resides in my documents folder.

Restart the software.

Now, when you complete an animation you can choose File > Fast Render to MP4 and a video file should appear on your desktop.



RESOURCES

Opentoonz originally was a commercial project and in 2016 was turned into open source software (though a premium version is available to purchase). Currently, the best documentation I've found is on YouTube so if you're having problems with a particular feature of the software, search online.