

N238 - INTRO TO 2D ANIMATION

This syllabus will be the official syllabus and will be updated, here on Canvas, as needed. Use this syllabus first and foremost. It is an abridged syllabus to offer you the most immediately relevant information, like class details and weekly assignments. For the full syllabus that references IUPUI's Code of Conduct, Mission Statement, Learning Outcomes, and Reasonable Accommodations for persons with disabilities, please save the copy I've emailed to you.

Section No.: 20442 Credit Hours: 3

Time: Fridays, 9 a.m. - 11:40 a.m.

Location:

IT 255, Informatics & Communications Technology Complex 535 West Michigan Street,
Indianapolis, IN
46202

First Class: Friday, January 14th | 9:00 a.m. | IT255

Instructor:

David Perry

BS in Media Arts & Animation, Lecturer

Office Hours: Mondays & Tuesdays [Noon - 3:00 p.m., call or Zoom], after class, or by request if available.

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COURSE DESCRIPTION

An introductory course to the foundational techniques of 2D animation applied in digital media. The course will cover the classic 12 Principles of Animation, fundamental storytelling principles, life observation, and practice work to prepare students to be able to create a variety of animations, including but not limited to entertainment, commercial, gaming, and educational purposes.

REQUIRED TEXT:

The Animator's Survival Kit

Richard Williams

Publisher: Faber & Faber; 1st edition (January 7, 2002)

ISBN-10: 0571202284; ISBN-13: 9780865478978

Supplementary (Suggested) Text:

The Illusion of Life: Disney Animation

Frank Thomas, Ollie Johnston

Publisher: Disney Editions; 1st edition (October, 1905)

ISBN-10: 0786860707; ISBN-13: 978-0786860708

STORY: Substance, Structure, Style, and the Principles of Screenwriting

Robert McKee

Publisher: Regan Books; Illustrated edition (November 25, 1997)

ISBN-10: 9780060391683; ISBN-13: 978-0060391683

Equipment Needed:

1. <http://www.google.com/drive>
 - Set up a new account using your university email, if you don't already have it.
 - You will be added to have access to the folder, as per the email you've been sent.
2. Drawing Pad and Pencils of Your Choosing
 - You will be filling one page each week with character illustrations and turning them in.
3. Cintiq Drawing Pen
 - https://www.bhphotovideo.com/c/product/735538-REG/Wacom_KP501E2_Intuos4_Grip_Pen_w.html

Software Used:

<http://www.iuware.iu.edu>

Adobe Animate

Adobe Photoshop

Adobe After Effects

Adobe Media Encoder

WEEKLY SCHEDULE

Subject to change, but I will inform you in advance of these changes, if they are necessary.

Week 1 (1/14)

INTRODUCTION TO CLASS:

Syllabus

Alan Becker Tutorials

Weekly Illustration Sheets

LECTURE – Brief Intro to The Hero's Journey

LAB – Brief Intro to Principles of Animation

ASSIGNMENT -- Viewings (not graded)

Watch all of Alan Becker's 12 Principles of Animation videos.

Watch an episode of any cartoon and note the Principles in action.

Week 2 (1/21)

LECTURE – Intro to Principles of Animation

LAB – Demonstration of Basic Tools in Animate, Watch Animation Examples

ASSIGNMENT 1 – Self Portrait

Create an Animate Document with each frame dedicated to a single portrait of yourself drawn in 5 different art styles. This is designed for you to get used to Adobe Animate's drawing tools and layout.

- HD, 24fps, HTML5 Canvas
- Name your file: *LastnameFirstname_SelfPortraits.fla*
 - Five self-portraits in five different illustration styles. (your choice)
 - One on each layer, and a layer beneath with at least one reference image of the style.
 - Name each layer according to the style you're mimicking.
 - Must be sketches. Any shading, if you choose, should be on a layer beneath so I can see sketches over top.
- All layers must be nested in a group titled "SelfPortraits"
- Extend each layer out to 24 frames (one second) and create a new Frame.
- Save your project as the standard .fla and upload them to the assignment submission form on Canvas.

Week 3 (1/28)

LECTURE –Squash & Stretch, Arcs, Timing, Slow-In & Slow-Out

LAB – Animating a bouncing sphere / Optimizing brush tool for sketching.

ASSIGNMENT 2 - Squash & Stretch

Create an Animate document that contains 3 animated spheres, each made of a different material. Animate each sphere on its own layer, animating it appropriately depending on the material you chose for each. So if your ball is made of rubber, it will squash, stretch, and bounce quite a bit in the animation. It will take longer to lose momentum, so it will maintain a higher bounce and will have more bounces. If the ball is a bowling ball, it will lose momentum very quickly, with very few bounces and minimal squash and stretch.

Your animations should highlight the principles of Squash & Stretch, Arcs, and Timing. Remember that timing has to do with the number of drawings between keyframes. Slower movement has more drawings closer together, and the faster the movement is, the further apart and the fewer drawings you will have. As an example, if you have a ball moving from left to right, more drawings will make the ball move slower across the screen. Fewer drawings will make it move faster across the screen.

- You can choose any material for your balls, as long as I can see that it loses momentum.
- You can hand draw them or use the shape tool to animate.
- You can have them bounce on the floor, wall, or ceiling, so long as the animation principles are present and properly applied.
- Each ball should have its own layer, and the layer should be named according to what material the ball is made of. (i.e.: "RubberBall" or "BowlingBall")
- All three layers should be nested in a group folder named "Bouncing Ball Assignment"
- Submit your assignment as a .fla file with the proper naming convention.

Week 4 (2/4)

LECTURE – Follow Through and Overlapping Action

LAB - Adding a tail to the ball.

ASSIGNMENT 3 – Arcs & Follow Through

Create an Animate document with a minimum of two bouncing balls on their own separate layers. Add a tail to these balls. You can animate any sort of tail you like, providing what sort of tail it is in the naming of the layer, just as you did with the material on the bouncing ball assignment. Your tails can be made of anything! It doesn't have to be a fox or cat tail--it can be made of fire or water or anything, so long as you animate it properly.

Just like assignments previously, make sure your file name and document organization (layers and groups) are well-kempt. Keep it simple, keep it clear. Your balls should each be on their own layer, and their tails should be grouped with them. I highly suggest having a group for each ball, within which is an arc guide layer (like we did in class), a ball layer, and a tail layer.

And as before, you can use shapes, hand-drawn, or a blend of both for this assignment. My only concern is how well it is animated. Make sure your decisions pay off! A good balance of appeal and efficiency is how the industry works, so don't be afraid to cut just the right corners--the final product is the focus. As long as that looks good and your file is organized, you'll do well.

Upload the .FLA to this assignment submission and add any comments you like.

Week 5 (2/11)

LECTURE – Straight Ahead & Pose to Pose, Anticipation

LAB - Animating fire and basic compositing with After Effects.

ASSIGNMENT 4 – Straight Ahead

Animate a fire in Adobe Animate using the Straight-Ahead principle of animation. Be sure to add enough frames that the fire doesn't appear too repetitive. The animation should be:

- 5 seconds long, minimum
- Animated using Straight-Ahead animation
- Exported as a GIF

Import the fire animation into Adobe After Effects.

- Have at least 1 transform animation on the fire layer (Opacity is what I used in class)
- Import a SFX mp3 of a crackling fire (or something relevant)
- Fade the SFX in and out using keyframes and adjusting the volume in the audio layer's properties

Export the completed animation as a Quicktime (.mov) file format with the h.264 codec.

Upload both your .MOV file and your Animate .FLA file to Canvas!

- Make sure your files, folders, and layers are organized and named appropriately
- Check the Outline in our shared Google folder for refreshers on the process

Week 6 (2/18)

LECTURE – Pose to Pose, Rough Character Animation

LAB - Creating anticipation and smooth movement for a leaping character.

ASSIGNMENT 5 – Leaping Character

READING:

Read pages 46-67 on Pose-To-Pose animation. Starts with a doodle of Bugs Bunny, ends with pyramid breakdown of workflow. Read this BEFORE you start your animation assignment. It'll help, trust me.

ANIMATION:

Create a rough (sketches) pose-to-pose animation of a character jumping from one place to another. Keep the Principles of Anticipation and Slow-In/Slow-Out in mind.

Create a rough pose-to-pose animation of a simple character jumping from one space to another. You can do any sort of jump you choose, so long as the character moves from one space to another--no straight up and down jumps. The character must move from one space to another, and your animation should highlight principles of Anticipation, Follow-Through/Overlapping Action and Secondary Action (arm motion), Timing and Motion, Arcs, and of course some amount of Squash and Stretch. These principles will mostly come naturally to animating this character properly.

Be sure to use Pose-to-Pose animation. Start with your Keys, then your Extremes, then your Breakdowns, and finally your In-Betweens. Scrub and play your animation as you work and edit your animation accordingly.

You should have:

- One layer with basic shapes animated. Circles, eggs, beans, cylinders--any shapes you chose to construct the character.
- A second layer with quick and rough details that connect those shapes. Just get the full basic form in.
- One layer with a rough background that shows where the character starts and where they end--like the cliffs I drew in class.
- One layer with your jumping arc roughed in, so you know the path along which you will animate your leaping character.
- All of these can be organized as you choose, so long as it is clearly organized. I'm going to start letting you decide, assuming the result will be clarity.

Submit your FLA file with the proper naming convention.

Week 7 (2/25)

LECTURE – Character Design for Animation (Solid Drawing, Appeal)

Developing a story character through psychology, environment, and backstory.

LAB - Character Design Demo

ASSIGNMENT 6 – Character Design and Presentation (MIDTERM)

Create a character model pack. This means a collection of design illustrations. You will be designing the character that will be used for future character animation in this course. You can use however many pages you feel are necessary, composing them in whatever way you feel best and most clearly presents your character. The pack will be almost entirely sketches, which show the basic underlying shapes and the layering of details overtop of these shapes. Use the references I've uploaded to our shared Google folder for visual aids. This model pack will include:

- 5 Pose Turn Table
 - 3/4 View, Side View, Front, Back, 1 3/4
- Breakdown of 5 Facial Expressions (with entire head drawn)
- 2 Variation Illustrations which show development alterations like proportion changes, wardrobe--anything.
- 4 elements of your character that make them unique, defined in the notes written on your pages.

Examples:

Big Hat - maybe it represents power
One arm is shorter than the other because the character is an anthropomorphic clock

One eye has an iris, the other does not - makes the character look wacky or crazy

Legs are little nubs - character walks daintily and quick

- 1 full-color illustration (can be implemented as the 3/4 View of the Turn Table)
- 1 page (minimum) description of the character. Talk about basic demographic data (age, sex, gender, etc),

political or spiritual ideologies, and MOTIVATION. Motivation is a REQUIRED topic.

Talk about maybe their

family history or cultural background. The point is, make me understand WHY this character is who they are and how they behave.

- BONUS POINTS: I will award you +5 points if you do 2 action poses for your character that show off their

personality! "Action" doesn't necessarily mean punching, running, etc. It can be sleeping on a rock, playing

video games, etc. Any activity or action that really tells me who your character is.

You can use any software you choose to do your design work. Photoshop is suggested, but not required. You will be turning your files in as PNGs or PDFs. Either is acceptable. But you do not

have to do this in Animate, and I highly suggest that you don't. Do it in an illustration software. You have two weeks to complete this assignment, and so I want the work to be very strong. Development is more important than artistic talent with this assignment. I want to know you understand how to develop the character in a meaningful way.

Engage me!

Week 8 (3/4)

LECTURE – Character Design, Con't

LAB - Workshop Midterm Projects, Troubleshooting

ASSIGNMENT - *N/A*

Continue Midterm Project

Week 9 (3/11)

LECTURE - Character design in motion. Capturing attitude through nuanced action so that the audience can read the character properly.

LAB - Walk Cycle: Personality through movement.

ASSIGNMENT 7 – *Character Walk Cycle*

READING ASSIGNMENT:

In the Animator's Survival Kit, read pages 102-117 on walk cycles.

WALK CYCLE ANIMATION:

Using the character you created for your Midterm, animate a rough walk cycle in Adobe Animate. You should have a group for your rough shapes--starting with your head and torso layers. Add layers for each moving part as necessary. Once the roughs are in, create a new group and add rough details, like hair, facial features, clothing, etc. Make sure these are grouped separately so I can easily view your rough sketches on their own.

Utilize the principles of animation. There should be squash-and-stretch, timing and motion, follow-through and overlapping action, secondary action, and arcs--and animate pose-to-pose! Animate using the Contact Method, drawing on the 2's, and animating the walk as an 8-drawing cycle (all as we did in class). Feel free to play around with this! But whatever you do, make sure you do it well. You can be ambitious, but make sure it's working for you.

Turn in your .FLA for this assignment.

SPRING BREAK (3/18)

No Class

Week 10 (3/25)

LECTURE – Character Emotional Animation: Phonemes

LAB: Creating phonemes, timing.

ASSIGNMENT 8 - Phonemes

Create a lip sync animation in Adobe Animate using symbols, frame picking, and (if you like) the Auto-Sync feature.

Your animation file must have:

- A head
- Facial features
- A mouth that animates properly with an audio track of someone speaking
- A symbol for the mouth phonemes
- An audio track of someone speaking

You may animate other facial features if you choose, using the Frame Picker.

You may draw as many phonemes as you think are necessary and Frame Pick them accordingly, or you can use the Auto-Sync, which requires you to illustrate a predetermined set of phonemes which you can find here:

Select your symbol

Go to the Properties panel

Go down to the Looping tab

Click "Lip Sync"

This will bring up a window which shows you the sounds you will need to mimic with your drawings.

This is ONLY necessary if you're using Auto-Sync.

Utilize the Lecture Outline for the process used to achieve this animation.

This assignment will be graded for smoothness of the lip sync and the accuracy of the phoneme drawings.

Turn in your .FLA file for this assignment.

Week 11 (4/1)

LECTURE – Character Emotional Animation: Psychology, Facial Anatomy, Nuance

LAB - Phonemes and Lip Syncing

ASSIGNMENT 9 - Lip Syncing

Either record yourself or use an audio clip of your choosing to create a complex lip sync animation. You will need to build up your animation from the basic shapes, to the connecting shapes, to the detailed rough sketches.

First get the basic shapes of your character sketched in, with a minimum of their full bust (head and shoulders). Start with the head, torso, hands, and SHOULDERS. This is to establish the character's body language and general movement as it matches up with your chosen audio.

Next, start connecting those basic shapes with things like the neck, arms, and generic jaw structure (which will be altered during the phoneme phase).

Now that you have all these roughs fully animated and you can see the body language and essential movements of the character clearly, add the facial contours to the head so that you can see the placement of the facial features (eyes, brow, nose, rough mouth).

Then add the details for the eyes, brows, and fingers if your animation uses hands.

Then get your phonemes animated in over top of these solid rough sketches. By now you have the entire thing animated except for your mouth and your secondary figures (hair, clothing). This makes it MUCH EASIER to sketch in your mouth. You will have to track your audio, scrubbing it frequently and placing your phonemes properly.

This assignment has no length requirement. Your audio will dictate the length. Choose expressive dialogue and animate your character accordingly. This is intended to be a film-style animation. That means your character's head MUST MOVE. The direction must change and your mouth must change shape accordingly. **NO STATIC HEADS** or asset-based phonemes. The head must move and the mouth must reflect the head's movement. This is all about animating complex shapes and movement. No puppets with asset-based phonemes. Think Disney. We're playing with that level of learning animation.

Submit your .MP4 and your .FLA. If the .MP4 has issues, I can still grade it according to the .FLA

Week 12 (4/8)

LECTURE – 1. Rendering, Compositing, Staging, & After Effects / 2. Discuss Final

LAB - Creating a Demo Reel using After Effects

ASSIGNMENT 10 - Compositing

Render out at least five of your previous assignments as MP4s and import them into After Effects. Arrange them into a demo reel using transitions, and add an opening title card with your name and "Demo Reel" as the title.

Be sure to include:

- A Title Card
- At least 5 of your previous animation assignments
- Transitions between the title card and each animation
- A music track

Render this out as an MP4.

TURN IN:

Your After Effects project file, your MP4, and the audio file of the music you chose. Put all of this in a .ZIP folder and submit it here.

ASSIGNMENT 11 - FINAL

For your Final Project, you may choose any animation you like, but it must be related to your Midterm character. See below for details.

DUE DATES:

- April 28th, 12:00am - FINAL ANIMATION, FINAL ESSAY
- May 6th, 8:00am - PEER REVIEW

Animation

- No length requirement.
- Must be related to your Midterm character.
- Must utilize a minimum of 5 Principles of Animation. You will discuss these in your essay.
- Must show emotion in the character through Acting.
- Must have audio. This can be music, dialogue, narration, sound effects, or any combination of these. The more robust, the better.
- Must include an opening title card to introduce the animation.
 - Include a Title and Your Name.

2-Page Essay

- Minimum two full pages, single-spaced.
- You will discuss your process.
 - What was your original vision?
 - What Principles of Animation did you employ, and where?
 - How successful do you think you were? Self-critique here.
 - What is your character going through at this point in their lives? Relate the animation to their full story.
 - What happened to them *before* the moment of this animation that led them up to this point? What will happen *after*?

Peer Review

- You will be assigned one or more peers to critique following the due date of the Final Project.

- After everyone has submitted their Final Projects for the due date, you will have the following weekend to complete your critique.
 - During this time, you will be reviewing your peer's finished project--or whatever they have complete--and critiquing it.
 - You will offer a 3-paragraph MINIMUM critique of their work.
 - 3 paragraphs, 3 sentences per paragraph. (minimum)
- If your peer does not turn in a Final, you will not be held liable for being unable to review their work.

TURN-IN:

- Your animation .FLA
- Your animation exported as a .MP4
- Your 2-Page Essay
- Your Peer Review (by May 6th)

Week 13 (4/15)

LECTURE – Creating A Pitch Bible

LAB - Workshop progress in Final Projects

Week 14 (4/22)

LECTURE – Creating Portfolios, Finding Jobs, & Networking

LAB - Workshop progress in Final Projects

Week 15 (4/29)

LECTURE – Review Final Projects

FINAL PROJECT DUE

Week 16 (5/6)

LECTURE – Final Class, Continue Reviewing Final Projects

PEER REVIEW DUE

Grading Information:

Weekly Assignments

All assignments are to be delivered in a folder with your name, class, and week titled. Weekly assignments will consist of an exercise to practice one or more of the 12 Principles of Animation, or to practice design and development elements.

Presentation Topic

This is your presentation of the character you developed for Midterm. You will develop a character, their backstory, their environment, their overall world, and the core conflict of their story and of their journey. What makes them engaging? Why should we care about their problems or their journey? Worth 200 pts.

Final Project Milestone

A final assessment of your ability to understand and implement the practices learned each week and is worth 300 points.

Assignments:

<i>Assignment</i>	<i>Due Date / Description</i>	<i>Points</i>
Assignment 1	Week 3 Solid Drawing / Portrait	100
Assignment 2	Week 4 Squash & Stretch / Bouncing Ball	100
Assignment 3	Week 5 Arcs & Follow Through / Ball with Tail	100
Assignment 4	Week 6 Straight Ahead / Fire Animation	100
Assignment 5	Week 7 Pose-to-Pose / Leaping Character	100
Assignment 6	Week 9 Character Design / MIDTERM Presentation	200
Assignment 7	Week 10 Walk Cycle	100
Assignment 8	Week 11 Phonemes	100
Assignment 9	Week 12 Lip Syncing	100
Assignment 10	Week 13 Pre-Production / Compositing	100
Assignment 11	Week 16 Begin FINAL ANIMATION	100
Assignment 12	Week 16 Essay	100
Final Week 16	Present FINAL ANIMATION	300

Grading Scale:

A+ 97 – 100 Outstanding achievement, given at the instructor’s discretion
A 93 – 100 Excellent achievement

A- 90 – 092.99 Very good performance and quality of work
B+ 87 – 89.99 Good performance and quality of work
B 83 – 86.99 Modestly acceptable performance and quality of work
B- 80 – 82.99 Marginal acceptable performance and quality of work
C+ 77 – 79.99 Minimally acceptable work (Core course must be repeated for credit)
C 73 – 76.99 Unacceptable work (Core course must be repeated for credit)
C- 70 – 72.99 Unacceptable work (Course must be repeated for credit)
D+ 67 – 69.99 Unacceptable work (Course must be repeated for credit)
D 63 – 66.99 Unacceptable work (Course must be repeated for credit)
D- 60 – 62.99 Unacceptable work (Course must be repeated for credit)
F Below 60 Unacceptable work (Course must be repeated for credit)
No credits toward major, minor, or certificate requirements are granted for a grade below B-.

Late Work:

Class assignments must be finished and ready for critique at the beginning of the class date it's due. Will only accept late work a week past due at a half-letter grade reduction unless adequate explanation is provided. "Adequate" is at the discretion of the teacher.

Final projects will not be accepted late.