

Launch your career in animation

Your guide to getting started in
the film and video games industry

cgspectrum.com



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BRING YOUR DREAM CAREER IN ANIMATION **TO LIFE!**



Whether you're interested in 2D or 3D animation, demand for animators is predicted to grow by 16% by 2030; about 7,800 new jobs are projected each year!*

This guide is to help you get started in animation in the film games industry. Learn about different jobs, get career tips, hear from those now working in the industry, and more!

* U.S. Bureau of Labor Statistics

“Animation is a hands-on tradition; you can’t learn it from reading a book, you have to do it. It’s exciting to watch enthusiastic people learn how to breathe life into inanimate objects.”

**Scott Claus, CG Spectrum Animation Manager
(Pocahontas, The Golden Compass, The Incredible Hulk)**

ABOUT CG SPECTRUM

***TRAINING THE NEXT WAVE
OF PRODUCTION-READY
FILM AND GAME ARTISTS***

CG Spectrum is a global top-ranked training provider offering specialized programs in animation, virtual production, game development, VFX, and digital painting since 2011.

We inspire and train creators through personalized mentorship from industry professionals, small class sizes, and a unique online learning model that supports different learning styles.

We're an Unreal Authorized Training Center, Unreal Academic Partner, Unreal Connector, SideFX Certified Training Provider, and Toon Boom Authorized Training Center delivering programs worldwide.



SOME OF THE STUDIOS THAT HAVE HIRED OUR GRADS:



THE ANIMATION PIPELINE

PRE-PRODUCTION



STORYBOARDS & ANIMATICS

The script is transformed into a storyboard and scenes are sketched out to give the screenplay its first visual iteration. Frames of action, shot types and camera angles are defined.



CHARACTER RIGS & ASSETS

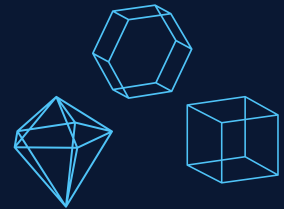
(APPLIES TO 3D ANIMATION ONLY)

Animators are given a rough, temporary model with a 3D rig, which acts like a digital puppet for the animator to move around in a scene to block out positions and framing.



LAYOUT & PRODUCTION DESIGN

Artists work with directors, producers, and supervisors to discuss the look and technical needs of a project. Layout and production designers may use drawings, photos, and 3D renderings to finalize the sets.



PREVIS

(APPLIES TO 3D ANIMATION ONLY)

The storyboard is further developed. 3D artists create low poly models and representations of scene locations, work with production to set up camera angles, and block out complex scenes.



CONCEPT ART & DESIGN

One of the most important phases of pre-production. Artists set the look and feel of the animation by creating fully realized images that define settings, characters, props, costumes, lighting, color, etc.



RESEARCH & DEVELOPMENT

Animators research certain elements of their shot and collect reference.

PRODUCTION



BLOCKING

The director or supervisor communicates to the animator what is required for the scene. The animator then blocks out a few “story poses” that encompass the action of the entire scene.



BREAKDOWNS

More frames are added to flesh out actions and acting choices, bringing the scene closer to completion.



FINAL POLISH

The last step for an animator and their final chance to refine every single element of every frame to make sure the animation is as entertaining as possible while also meeting the director’s or supervisor’s requirements.



KEYS

The essential poses that tell the complete story of a scene with additional poses added to convey character, humor, action, or design beyond the blocking pass.



IN-BETWEENS

The next-to-final pass in which an animator adds as many frames as necessary to make the scene work.

POST-PRODUCTION



3D MODELING & TEXTURING

(APPLIES TO 3D ANIMATION ONLY)

Characters, props, environments, buildings, objects, and more are researched, modeled, and textured.



FX & SIMULATION

(APPLIES TO 3D ANIMATION ONLY)

Simulated elements are added seamlessly to the footage. VFX artists work alongside animators to integrate effects such as destruction, fire, liquids, smoke, particle simulations, etc.



COMPOSITING

VFX compositors seamlessly integrate the CG assets, matte paintings, and live-action footage to make a single moving image, known as a shot. They match each layer in terms of light and shadow, color and grading, perspective, and depth, while also ensuring each shot maintains continuity within its sequence.



RIGGING & ANIMATION

(APPLIES TO 3D ANIMATION ONLY)

A system of controls, or digital skeleton, is built for animators by adding bones, calculating and implementing skin weights, and adding muscles to create natural movement. Animators use the custom controls of the rig to bring the character, prop, or vehicle to life as well as working with and tweaking motion capture data.



LIGHTING & RENDERING

(APPLIES TO 3D ANIMATION ONLY)

Lighting artists ensure the light color, intensity, and shadows of 3D elements match up with the original footage. Each sequence of frames is then rendered.



SOUND DESIGN

Dialogue, special effects, music, and foley are mixed and edited to create the final soundscape.

12 PRINCIPLES OF ANIMATION

These concepts apply to both 2D and 3D animation and are a guide to creating the illusion of real life through movement and character using the physics of movement and principles of anatomy. They have been used by Disney animators since the 1930s, and still stand the test of time today.

SQUASH & STRETCH

Examines how an object changes shape by forces acted upon it and deals with how to animate weight and volume. Think of a bouncing ball that appears stretched while falling and squashed once it hits the ground.

ANTICIPATION

A small movement that precedes a larger one. It is a subtle clue that a major event is about to happen. Think of a character squatting before taking a leap into the air.

STAGING

Sets the scene in a clear way to avoid confusion. The audience's attention is directed towards what is of greatest importance in the scene.

STRAIGHT AHEAD VS. POSE-TO-POSE

The drawing process of 2D animation, and also useful for creating 3D work. Straight ahead means drawing the

animation frame-by-frame from beginning to end. Pose-to-pose means drawing a few key frames and then filling in the intervals. Most animation software fills the gaps in a pose-to-pose set up for you.

FOLLOW THROUGH & OVERLAPPING ACTION

The tendency of different parts of a body or object moving at different speeds. Think of a runner skidding to a halt.

SLOW IN & SLOW OUT

The gradual acceleration and deceleration of objects moving from point A to B.

ARC

The curved motion of objects. The laws of physics create a curved trajectory of moving objects. Skilled animators will animate in arcs and not in straight lines.

SECONDARY ACTION

Adding a secondary action to the main action adds dimension and depth to a scene.

TIMING

Controlling the speed of an action by the number of drawings or frames assigned to its articulation. More frames are used to create slower action and less frames for faster action.

EXAGGERATION

Drawing a subject in a heightened or extreme way while still maintaining its reality in nature and the world.

SOLID DRAWING

Sets down the laws of perspective in three-dimensional space. This refers to anatomy, weight, balance, light, shadow, depth of field, etc.

APPEAL

Giving characters charisma and appeal and making them compelling to watch in a broad range of ways.

JOBS IN ANIMATION



ENTRY-LEVEL: \$51,350 USD

MID-CAREER: \$62,701 USD

SENIOR: \$73,860 USD

SUPERVISOR/DIRECTOR: \$120+USD

Salaries may vary depending on location and studio size

3D ANIMATOR

3D animators manipulate digital characters, props, and machines to move through and interact with their environment (digital or live-action) according to the actions laid out in a script and/or storyboard. They breathe life into characters, creatures, and objects by producing the motions, gestures, and expressions of a rigged 3D model frame-by-frame, which is then strung together to form the action.

2D ANIMATOR

Following a script and/or storyboard, 2D animators draw frame-by-frame sequential images that simulate the actions of a character, prop, or machine in a two-dimensional space. 2D animators usually begin with rough sketches before refining them to line drawings. Once the story and voice-overs are locked in, they will layer their animation into the relevant scene/background and continue refining the movements and cleaning up their lines.

3D PREVIS ANIMATOR

Previsualization helps filmmakers envision a film before going into production, almost like a 3D storyboard. Based on the script or 2D storyboards, a previs animator's role is to see how the action of a shot or sequence could play out, which they translate into a 3D space, experimenting with different camera staging (angles, lenses, moves, etc.) and rough animation using low-poly assets.

3D RIGGER

There are two main roles of a rigger: rigging and deformation. Rigging is the act of generating the bones and controls of a 3D model that will allow an animator to manipulate it. Deformation is the process of making the points of the model. It follows the rig/armature in a smooth and believable manner and determines the ways that an animator will be able to manipulate it. Knowledge of human and animal anatomy is a helpful base.

2D CLEAN-UP ARTIST

A clean-up artist's main job is to turn rough sketches into articulated line drawings, giving full definition and style to the original concept art. They trace over the key drawings in solid lines, paying close attention to retaining the essence of the original sketch. When working on characters, they create a model sheet that demonstrates how to draw a character from many angles.

LAYOUT ARTIST (2D/3D)

A 3D layout artist establishes the virtual camera(s) for each shot—its perspective, depth, and movement. They help frame all the elements and the action in a shot through traditional screen language (close-up, mid-shot, wide-shot, etc.). Although technically, this job does not usually involve any direct animation, it is a useful skill for animators to learn and can involve rough animation blocking, if required. The role of a 2D layout artist is similar, except that everything is “flat.”

3D ANIMATION TD

Technical directors (TDs) generally assist animators with the more technical components of their animation, or work after the animation is creatively complete to ensure it can be passed on to other departments without any issues. They look for issues like penetrations of background elements or other characters (or characters penetrating into themselves), weird shadows, or other inconsistencies. They also help to automate and optimize tools so animators can work more efficiently.

CROWD ARTIST (2D/3D)

Crowd artists in 2D and 3D will do walk cycles and other random behaviors that can be looped and replicated many times to create a mass of action (walking, cheering, idling, etc.) simulating a crowd or group of something. In 3D, a crowd has to work in 360 degrees, whereas 2D crowds will generally only work from one angle.

“When it comes to finding animation jobs there is no secret to the formula. The formula is pretty well known: Work hard and have a solid plan for where you want to go.”

**Spectra, CG Spectrum 3D Animation Mentor & Senior Cinematic Animator
(Uncharted 4: Hogwarts Legacy, A Thief's End, Far Cry 6)**

STORY DEVELOPMENT

Story development involves designing the framework for a story from the top and working with producers and/or directors to create characters and narrative arcs. People who work in story development need to be able to express themselves visually by creating story panels or boards, along with other illustrative artwork—meaning you have to be able to draw (people, objects, actions, and environments) legibly and efficiently.

CHARACTER DEVELOPMENT/ DESIGNERS

Pulling inspiration from the script and concept art, a character designer/developer forms specific looks and traits for each character (costumes, poses, color palettes, makeup, era, etc.) while also ensuring the qualities they create are feasible with the budget. They will need to be skilled at drawing, sketching, and animating, and know how to work with mouth charts, expression sheets, shadow and color indications, and marketing artwork.

ANIMATION DIRECTOR

An animation director is in charge of an animated feature. They also act as a go-between, balancing what the producers want with what their crew can viably achieve, and providing creative feedback. An animation director must understand each step in the production pipeline, so they can monitor quality control and coordinate between the various departments and ensure everyone is maintaining the overall creative vision.



Animation can lead to many creative career options. These are just some of the career paths you could pursue. As technology evolves and as VR/AR and virtual production gain traction, expect to see more exciting roles!



GET A JOB IN ANIMATION: 7 STRATEGIES FOR SUCCESS

GET THE SKILLS

Check out job ads at companies you want to work for—see the skills they're hiring for, then build your skills! There are many courses with varying levels of support and interaction. To fast-track your education, CG Spectrum's career training includes personalized mentorship from industry professionals so you can progress faster as an animator, and a specialized curriculum updated regularly to reflect industry standards.

STAY AHEAD OF TRENDS

Google online tutorials, webinars, conferences, publications, and local 2D/3D events to stay on top of trends and keep your skills fresh.



SUGGESTED RESOURCES

- [Toon Boom: blog | YouTube](#)
- [Maya Support & Learning](#)
- [The Animation Guild](#)
- [Cartoon Brew](#)
- *The Illusion of Life: Disney Animation (book)* by Ollie Johnston and Frank Thomas

ANIMATE YOUR OWN PROJECT

The best way to understand the nuances of animation is to create your own short projects. This helps showcase your skills and knowledge to potential recruiters.

PARTICIPATE IN COMPETITIONS

Animation competitions are a great way to gain experience, and you'll often get access to a rigged and modeled asset to practice. Use the final product in your portfolio. CG Spectrum runs regular challenges for students to practice working to a brief and a deadline.

ENGAGE WITH COMMUNITIES

Building connections online is vital to getting your name and skills recognized and is a chance to interact with industry professionals who can offer advice or jobs.

COLLABORATE WITH PEERS

Do you know a modeler looking for someone to bring their latest asset to life? Or a lighting artist who'd love an animation scene to render? Collaborating with peers can be fun, and help you both create polished work for your portfolios.

INTERN WITH A STUDIO

Getting an internship with an animation company you want to work for is a way to get your foot in the door. This option is not viable for everyone, but can be an excellent way of gaining hands-on experience while networking at the same time.

DEMO REEL TIPS

To get a job in animation, you'll need an amazing demo reel!
Here are some tips to get you started.



Students, keep your reel <1 min. If you have 1-2 years' experience, < 2 mins



Include production experience if you have any



Show reference footage when applicable and include any relevant credits



Everything in your reel should be 10/10, don't include mediocre work



Work in progress is fine, but make sure it's your best work



Ensure your camera work doesn't detract from your overall animation



Renders, FX, and lighting can enhance your shot, but focus on the animation



Music shouldn't distract from your work, it should add to the animation performance



Watch your reel many times and look for errors like edits, framing, and spelling



Get feedback from at least 3 mentors or industry pros before releasing online



Share your reel on your website, ArtStation, LinkedIn, and other social channels

The goal of your demo reel is to show your understanding of the mechanics of motion as well as the ability to inject "life" or "character" into your work. Focus on making your animated character look like it lives and breathes regardless of what action it is performing.

READY TO START YOUR CAREER?

There are lots of resources available to help you learn the software and become a great animator. However, it can often be hard to find the most up-to-date and relevant information or get professional feedback on your work.

Fast track your career with personalized high-end training from industry professionals. CG Spectrum offers specialized career training and mentorship from 150+ film and game industry experts to get you job-ready sooner

LEARN FROM INDUSTRY PROS LIKE THESE:



SCOTT CLAUS
Manager of Animation
Pocahontas, Hunchback of Notre Dame, Prince of Egypt, Road to El Dorado



MARK PULLYBLANK
Head of 3D Animation
Avatar, The Adventures of Tintin, The Smurfs, Night at the Museum



SPECTRA
Mentor of 3D Animation
Hogwarts Legacy, Uncharted 4: A Thief's End, Far Cry 6



ALFREDO CASSANO
Mentor of 2D Animation
Klaus, Tom & Jerry, Gravity Falls, Nella the Princess Knight



AMBRE MAURIN
Mentor of 3D Animation
LEGO Avengers, The Adventures of Puss in Boots, Avatar, Where the Wild Things Are

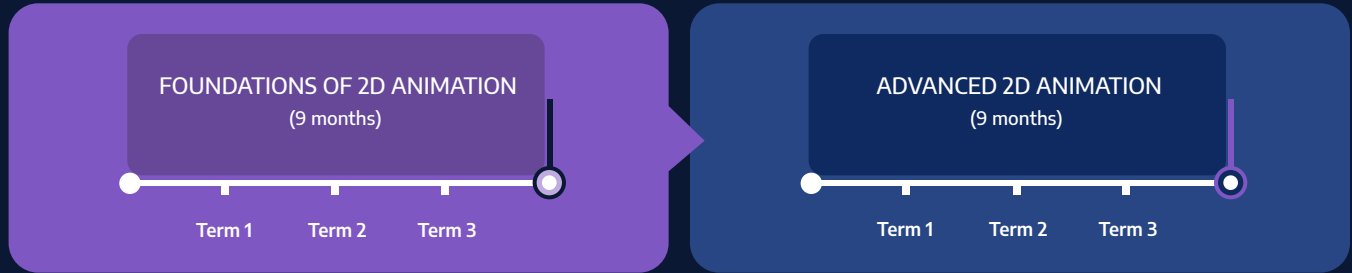


SYKOSAN
Mentor of 2D Animation
Love Death & Robots, Cry About it Later (Katy Perry music video), Teppen

OUR 2D ANIMATION COURSES

Get on track to finding your dream job with CG Spectrum's career-focused training and industry mentorship. Students receive a Certificate of Completion at the end of each course.

PATHWAY 1 (BEST VALUE!)



PATHWAY 2

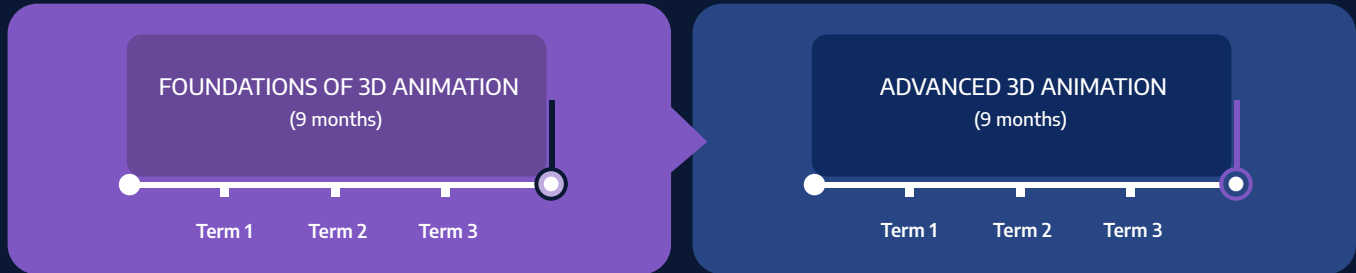


ANIMATING FOR KATY PERRY

Check out The CG Spectrum Podcast episode with 2D animation filmmaker Sykosan on animating for Katy Perry's video *Cry About it Later*

OUR 3D ANIMATION COURSES

PATHWAY 1 (BEST VALUE!)



PATHWAY 2



WATCH AN ANIMATOR IN ACTION
Check out CG Spectrum's animation live streams for demos, tutorials, and more from an industry expert!

BENEFITS OF STUDYING AT **CG SPECTRUM**



INDUSTRY MENTORS

Learn from experts who have worked on major films and games.



FLEXIBLE SCHEDULING

Plan your studies around your work and family commitments.



JOB-READY SKILLS

Build practical and relevant job skills that studios are looking for.



PAYMENT PLANS

Pursue your passion and start working sooner with flexible payments.



CAREER DEVELOPMENT

Personalized support, portfolio/CV reviews, and interview prep.



AMAZING ONLINE COMMUNITY

Join our supportive community of students, alumni and mentors from all over the world.

STUDENT SUCCESS

JAMES B



“Studying at CG Spectrum has been transformational for me and my career. After a decade in a different career I was looking to retrain, and CG Spectrum helped make that change possible. The approach and professionalism of all the mentors at the school helped me navigate this career change with excitement, equipping me with a fantastic knowledge base and work ethic.”

JASMEET S



“I was able to create a demo reel and build connections with professionals that ultimately led to my first opportunity as an animator at Sony Pictures Imageworks. HUGE shout-out to CG Spectrum’s Career Development Manager, Maxine Schnepf. She guided me through the entire application process. I honestly believe I would not have gotten this opportunity without her help.”

SHRAVANI K



“It’s been extremely helpful for my portfolio and my confidence as an artist! I’ve learned so much about not only animation, but the thought process an artist goes through when creating a piece.”

TIFFANY L



DREAMWORKS

“I’ve learned and grown so much throughout this program and I loved that there are many resources in the CG Spectrum community. It’s also great that there’s a career advisor to guide students on getting their first jobs. I made sure to take advantage of everything that CG Spectrum had to offer and as a result, I was able to land my dream job at my dream company.”



YOUR FUTURE IN ANIMATION AWAITS!

🖱️ Explore courses and apply at cgspectrum.com

“If you’re planning a career change, CG Spectrum courses will help you set you on the right path. Taking the 2D Animation course made me feel more confident about the possibility of a career change and pursuing job opportunities in the animation industry. It helped me learn the skills and tools needed in professional environments.”

Dagmar F, CG Spectrum 2D Animation grad



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