



One-Year Conservatory *in* 3D ANIMATION & VISUAL EFFECTS

Students in the 1-year Animation Program working on complex, industry-standard animation software.



LOCATION

**NEW YORK CITY;
LOS ANGELES, CALIFORNIA**

Locations are subject to change.

For start dates and tuition, please visit nyfa.edu



“
*Animation offers a medium of story telling
 and visual entertainment which can bring
 pleasure and information to people of all
 ages everywhere in the world.*”

- Walt Disney

OVERVIEW

The One-Year 3D Animation & Visual Effects Program immerses students in the many complexities of the art and craft of 3D Computer modeling and animation. Students in the One-Year 3D Animation & Visual Effects Program write, animate, direct, and edit their own computer animated short films.

No previous drawing experience is required for the program. Animation students at the Academy will be able to create fully rendered 3D characters and environments. This program is designed for individuals who want to learn how to master a high-end 3D computer program and gain significant skills in the art and craft of 3D computer modeling and animation.

The One-Year 3D Animation & Visual Effects Program provides students with state-of-the-art facilities and hands-on experience with the industry standard Maya software and top-notch equipment.

The Academy is home to a distinguished and accomplished faculty of professional 3D animators and visual effects artists. Each faculty member possesses a unique skill set that helps to create well-rounded students who are comfortable with the numerous aspects of the animation pipeline.

Students who graduate from the 3D animation program at the New York Film Academy have a number of career paths open to them and can go on to work in such diverse industries as animated films, animated series, visual effects work, video games, and much more.

Please Note: curriculum and projects are subject to change and may vary depending on location. Students should consult the most recently published campus catalog for the most up to date course information.

WHAT YOU WILL LEARN & ACHIEVE

Students are expected to demonstrate technical control and artistic growth in the following areas upon completing the program:

- **Modeling:** Building objects from polygonal primitives and/or NURBS.
- **Animation:** Animating objects and characters whilst demonstrating a clear understanding of Pose to Pose techniques, Squash and Stretch, Balance, Weight, Overlap, Timing and Secondary Action.
- **Rigging:** Creating skeletons, attaching them to a character's geometry and creating animation-friendly controllers.
- **Materials, Textures and Lighting:** Creating believable materials for all aspects of a scene, making and importing texture files, creating procedural textures and setting up lights and cameras for the shot.
- **Compositing:** Basic image manipulation, Roto/Paint, procedural compositing, basic image compositing, masks and mattes, tracking and stabilization, color correction, compositing with 3D elements, combining 3D tracking, CG elements and live action.
- **Dynamics:** Expressions, intro to particles, animating particles with expressions, nCloth, particle emission effects, fluids, rigid body dynamics and the Bullet solver.
- **MEL and Python Scripting.**
- **Drawing and Anatomy.**
- **One-Year Students will graduate with a 1 to 2 minute Demo Reel**

COURSE DESCRIPTIONS

GRAPHICS ESSENTIALS

This course is comprised of Photoshop, Sound and Editing, and After Effects. The Graphics Essentials course will introduce animation students to the basic skills necessary to specific requirements of the animation pipeline.

STORY ESSENTIALS

This course is comprised of Character Design, Storyboard, Animatics, Screenwriting, and Directors Craft.

Students are presented with an integrated approach to story and learn how to lay out ideas economically and clearly from the initial written idea to a fully fleshed out pre-visualization of their animation.

MODELING I

This course focuses on creating hard surface and organic models, using a variety of industry standard software. Students learn to create professional, realistic 3D characters and props from scratch. The course focuses on creating complex models using simple step-by-step techniques.

LIGHTING AND SHADING I

Students learn lighting, rendering, and textures using the mental ray plugin for Maya in conjunction with Maya materials.

RIGGING

Students learn rigging theory, and how to create skeletons, use inverse Kinematics and create dynamic controllers for animated characters.



ANIMATION

Understanding animation using Maya software is but a small part of our animation course. In the animation classes, students learn how to create realistic motion, follow through, and how to convey the weight of a character. At NYFA, a great deal of focus is placed on accurate body mechanics via observation and reference footage.

The integration of the character’s personality, initially developed in the “Elements of Story” course with the movement and behavior of the animated character, is also a primary aspect of the animation student’s work.

DRAWING & ANATOMY

The purpose of this course is to explore and become familiar with the human form. Students will gain a deep and intimate knowledge of the human form on a perceptual and anatomical level.

The classes will focus on direct observation of a live model, gesture and accurate proportions. This course will also instruct students on the observation and recognition of light to describe form. There will be homework assignments, and a comprehensive anatomy exam at the end of the semester. Students are expected to attend and participate in every class.

LIGHTING & SHADING II

This course is an introduction to mental ray shaders, batch render commands and scripts, and user variables. Students will learn mental ray sampling and filtering, sampling algorithms, filtering techniques, rasterizer sampling, and BSDF, among other techniques in rendering and lighting, which will enable participants to create realistic lighting for animation and the integration of CG elements into live action environments.

SCRIPTING

This course is an introduction to Python and MEL to create well-designed scripts and maintain existing projects with efficiency in all areas of the animation pipeline. Areas of study will include Python-Variables and Objects/Open Environment, Python-Loops, Conditionals, Scopes and Operators, and Python for NUKE.

COMPOSITING I

The goal of this class is to give students a fundamental understanding of compositing using real world examples. There will be an emphasis on keying, color correction, tracking, and roto in the Foundry’s industry standard NUKE software.

DYNAMICS

This course uses example projects, that are executed in class from start to finish. All technical aspects of creating an effect will be covered. The session will start with a demo of a finished effect and then, step by step, students will learn how it was achieved. Subjects taught include introductions to expressions, animating particles with expressions, nCloth and Particle-Fluid Integration, and advection-driven effects.

MODELING II

This course focuses on both organic and hard surface modeling. Students learn to reintegrate high polygon models into low polygon environments for animation and rendering using cutting edge methods of retopolization, and employing the discipline of displacement and normal mapping models.

PROJECT SUPERVISION I

Project supervision sessions allow for students to work one-on-one or in small groups with the instructor to examine and execute the necessary steps specific to the completion of their final projects. This individualized attention will assist students to create a high level of work for inclusion in their reels that will be used to help gain entry into the animation VFX job market.

COMPOSITING II

This course is a continuation of Compositing I and will build on the knowledge accrued during the previous semester.

MOTION CAPTURE

Students have the option of using motion capture data for their projects. Using the industry standard Motion Builder software from Autodesk, students learn to refine the mo-cap information for animating characters in their projects. This course also builds upon and refines animation principles learned in the first semester.

PROJECT SUPERVISION II

Instructors will continue to work with students on finalizing their reels including VFX breakdowns of effects to demonstrate how their final shots were created.

SCULPTURE

This course teaches the sculptural techniques with a variety of clays geared toward character-based and realism-based artworks. The syllabus covers armature construction, neutral and dynamic posing, and techniques.



The New York Film Academy is an Autodesk Certified Maya training center.

Animation students have the option to take the Maya accreditation exam at the end of the program. This is an industry recognized credential, and those who pass the exam will be listed in the Autodesk Certified Professionals database.