

Top of the Class

Eight animation and vfx classes that will keep you ahead of the competition. by Ellen Wolff

The reality of today's highly competitive job market means that students need to be thinking about building a robust resume of skills while they are still in school. Having the right skill sets upon graduation can make the difference in being considered for a job—or not. We asked eight well-known schools to tell us which classes they thought were important for preparing their students to enter the world of work, and here's what they told us:

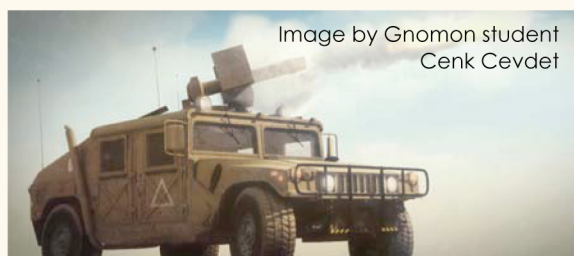
Intermediate Animation Production 14 Weeks, On Campus Tisch School of the Arts, New York University, N.Y.C.

When students reach junior year in Tisch's Kanbar Institute of Film and Television, they get the chance to study with the Oscar-winning animator John Canemaker. In his Intermediate Animation Production class, Canemaker guides students through the production of solo animated films. "They have only 14 weeks to complete a film, so I encourage them to do films that are 30 seconds to one-minute long. If they go over, they do it at their own risk, because there are no incompletes given in this course," Canemaker says. "Part of the discipline of becoming a professional is time management and organizational skills. I think creativity is extremely important in the beginning, and story really is king. But then it gets down to production, and that's what they're not used to. This course is about getting them used to delivering on time and delivering something of quality."

Canemaker starts dialogues with these students months before the class actually starts, so that they arrive with storyboards, concepts and even scripts for their planned films. He also conducts weekly critique sessions of the students' works-in-progress—and encourages everyone to weigh in. "This helps them to consider other viewpoints about their work and develop a bit thicker skin." The results of Canemaker's approach are im-

pressive. Last year, five students from this class won National Board of Review Awards of \$2,000 each for their animated films, which was a first.

From his perspective as a veteran teacher, Canemaker observes, "The thing about animation is that through the years it really has become a cross-over point for live-action students as well as people who are interested in focusing on animation. You need to know everything today!"



Character Animation 2 10 Weeks, Online and On Campus Gnomon School of Visual Effects, Los Angeles, Calif.

"Becoming a competent animator on the level of feature films is an involved process," says Gnomon teacher and DreamWorks character animator Chris Kirshbaum. "Character Animation 2 is my favorite class to teach because that's when students have gotten the basics out of the way and I start to see the light bulbs turning on." While Autodesk Maya is the software used, Kirshbaum says, "It's not a technical class. Teaching today's students what buttons to push is never the problem. The challenge is always in applying animation principles and learning acting. I teach this like an acting class. We talk about the emotions as well as the mechanics of characters."

Kirshbaum, who's also currently working on *Madagascar 3*, tries to get his students ready for professional critiques by focusing on the issues that film directors talk to him about when he's submitting his own work for approval. He stresses the highly iterative nature of producing good character animation, and how it can

come down to doing things over and over again. "When I was a student at CalArts, our teachers said, 'Everybody's got 100,000 bad drawings in them, and as soon as you get those out of the way, that's when you start to get good.'"

3D Modeling 3 for Games Two Semesters, On Campus Ringling College of Art and Design, Sarasota, Flor.

"This class is focused on creating art that works in a real-time game situation," says teacher Martin Murphy, a 20-year veteran of the game industry who was previously a senior producer at Midway Games. "It's part of a sequence of 3D modeling classes taken by students in Ringling's Game Art and Design major. We teach 3D Modeling with the tools of the real world, including the Unreal Development Kit, Pixologic's ZBrush, Autodesk Maya and the Adobe Creative Suite. These students are savvy with the technology, so we focus on improving their aesthetic sensibilities. We want them to create art that best supports and communicates the concepts of a game experience."

"All of their deliverables in this course have to run in real time," notes Murphy, who's also a Ringling alumnus. "Their end results typically are in the form of beauty shots—their best collections of lit models and textures—as well as a contact sheet that shows a potential employer how they optimized their content and laid out their textures to be efficient. They also have a movie file that's either a fly-through or a camera shot that helps describe the game play. We make a great effort to ensure our students are well prepared for the common game industry practice of 'art tests.' They're prepared to optimize content for all kinds of games, from a racing game or a

fighting game to a sports game or a first-person shooter."

Animals and Creatures Two 12-Week Sessions, Online Animation Mentor

This course is designed to teach the skills to effectively animate four-legged characters and fantasy animals like dragons. "We focus on what makes an animal or creature unique," says Luci Napier, Animation Mentor's curriculum director. "We start with basic quadruped walks and ultimately dig into the possibilities of integrating animation with live-action plates." The course is structured around weekly streamed lectures by experienced creature animators, including ILM's Rick O'Connor and Tippett Studio's Tom Gibbons. The participants work with rigs provided by Animation Mentor and then "meet" online with their mentors and fellow students for critiques of their assignments. "Learning to take and give criticism prepares you for a production environment," explains Napier, a CalArts grad whose professional credits include *Madagascar* and *Shrek 2*.

"We're not just teaching students to just push buttons or train for one specific area. It's so easy to pigeonhole yourself as 'a vfx character animator' or 'a stylized cartoon animator.' The reality right now is that you need to understand the principles and foundations of animation and be able to apply them to whatever film you find yourself on. We want them to learn the best industry practices—so they see examples of different pipelines from different studios. Every studio has a unique way of working, and even within studios, each show is going to have a slightly different way of working. Students need to learn *how* to learn, because this industry will keep changing."

ZBrush Two Semesters, On Campus California Institute of the Arts, Valencia, Calif.

An unmistakable sign of these digital times is the growing popularity of Pixa-

logic's ZBrush software among animation pros. It is why CalArts teacher and Disney veteran John Mahoney lobbied to teach ZBrush within the school's storied character animation program. Mahoney teaches the basic use of ZBrush for modeling and sculpting in 3D during the first semester, and then devotes the optional second semester to advanced projects.

Mahoney, who also teaches traditional clay sculpting at CalArts, says, "We still require students to learn clay first, so they

Palowich, a Sheridan alumnus who's also a working animator. The class comes at a time in Sheridan students' education when they are working on their solo senior projects, which Palowich calls "crunch time." This course focuses on teaching them how to render the images in their Maya-animated films using the mental ray renderer. The class teaches students how to break down images into layers for rendering, so they can apply that knowledge to whatever look they want. Palowich

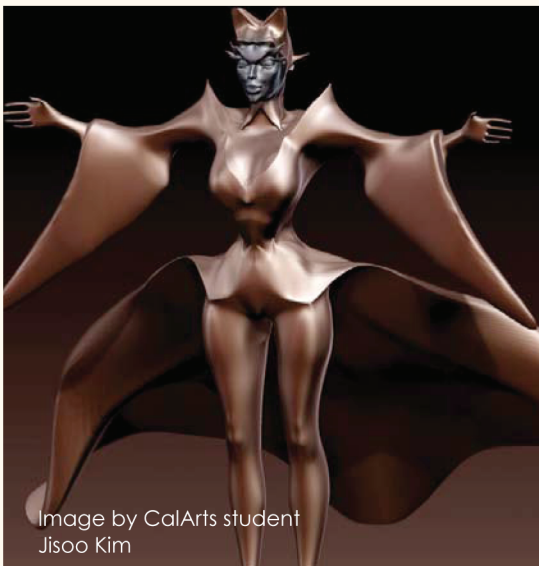


Image by CalArts student
Jisoo Kim

get a sense of what things feel like in the real world." But he notes that in the world of production, directors like to be able to easily change character designs. "With a real sculpture it's a nightmare to change it." He notes that even students who bring a traditional animation background to this class have no trouble adapting to ZBrush. "It's very intuitive and user friendly. You don't need to be a technician anymore—my students start creating portfolio pieces on the first day." Mahoney feels that because there's industry demand for people trained in ZBrush, it is something that graduates can readily use professionally. "Why not take your artistic skills and channel them towards where the demand is? It can open doors."

Final 3D Rendered Frame Class **One Semester, On Campus** **Sheridan College,** **Ontario, Canada**

This is a fourth year course within Sheridan's highly respected Bachelor of Arts animation program. The Final 3D Rendered Frame Class is taught by Mark

next *Star Wars* saga. We're really trying to get the students to produce a one-minute film that they can realistically pour themselves into." The ultimate goal for Palowich is to have his students develop skill sets that prepare them to work in the widest range of markets—from video games to medical animation. "Don't close the door on anything because you never know what you might be working on next year."

Compositing and Scene Finishing **Four Weeks, Online and On Campus** **Full Sail University,** **Winter Park, Flor.**

Compositing and Scene Finishing is part of Full Sail's accelerated Bachelors in Computer Animation program, which is a 21-month program on campus and 32 months online. It is taught by Joe Brandibas, who's also the program's department chair for Technical Arts. In this course, students learn to take 3D-CG elements they've created in Maya and incorporate them into live-action plate photography. "My class teaches them how to take their

3D and match the lighting and the motion of the camera in a live-action plate," says Brandibas, an animation veteran who's worked for clients as diverse as Fox News and Disney Parks.

But Brandibas also pairs his students up with others in the school's film production program so that they learn to interact with a crew. "They go out onto the backlot with the film guys, who shoot footage for them." Then they use this footage to learn scene tracking and object tracking—they recreate camera motions in CG and attach CG objects and then render their CG in mental ray and make it photoreal. They also use Nuke for compositing and SynthEyes for tracking. And their final projects are fully composited scenes. Brandibas believes that this approach gets the students out of the 3D bubble and helps them understand that they will be working with other people.

Motion Capture Performance **Two Semesters, On Campus** **USC School of Cinematic Arts,** **Los Angeles, Calif.**

As performance capture becomes increasingly prominent in both animation and visual effects, it is not surprising that USC offers classes in this technique at its Robert Zemeckis Center for Digital Arts. USC alumnus Eric Furie teaches a one-semester fundamentals course, followed by an advanced course in a second semester. He notes that the course covers both the principles of motion capture and also virtual cinematography with a 3D volume. The students have unfettered access to the school's motion-capture stage, a 25 by 15 by 12 foot-high space equipped with Vicon cameras. It's the same technology that Zemeckis' ImageMovers used for his performance-capture films, notes Furie, "So we're not lagging



USC's Motion Capture Performance class

there."

The intro course requires students to complete both one-minute and three-minute short films. "It's very much hands-on," says Furie. "I focus on the performance capture of the work, however—don't force them to render a finished film." Furie believes that performance capture is becoming an essential skill across several industries. "I've seen animators who've come out of our program jump between DreamWorks and Electronic Arts and Rhythm & Hues. So the skill sets that people are required to have are changing in very interesting ways. There was a time when generalists were not as valuable as specialists, but that's changing. Motion capture has become a robust part of what we do in different

Find out more about these schools and their course offerings by visiting them online:

Animation Mentor
animationmentor.com

California Institute of the Arts
calarts.edu

Full Sail University
fullsail.edu

Gnomon School of Visual Effects
gnomonschool.com

Ringling College of Art and Design
ringling.edu

Sheridan College
sheridancollege.ca

Tisch School of the Arts – NYU
tisch.nyu.edu

USC School of Cinematic Arts
cinema.usc.edu