

Accomplishments in Teaching
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At Sam Houston State University, I teach Advanced 3D Animation (ARTS 3344), Shading Lighting and Rendering (Arts 4355) and Animation Portfolio (ARTS 4358). I teach Advanced 3d and Shading Lighting and Rendering once during each Fall and Spring Semester. In the Spring semesters, I also teach Portfolio averaging a course load of 2x3 not counting for independent studies of which I have taught three of since 2017. I have taught each of these courses since the beginning of my time with SHSU. Each course has evolved positively and faced challenges during the Covid-19 Pandemic.

ARTS 3344 is a course that I have significantly revised since coming to SHSU. Originally, this course focused on 3D polygonal modeling with some other animation concepts included. I have developed this course to include character rigging and the concepts and techniques to complete the pipeline of skills needed as a 3d generalist animator. Additionally in 2019, I included the use of Zbrush as a character sculpting toolset to introduce students to another industry standard software.

In ARTS 3344, Students learn intermediate to advanced 3d Modeling techniques and character rigging approaches. Students are assigned nine to ten projects each semester. In the first 8 weeks of the course, we focus on learning modeling techniques by modeling items they bring in or create concept art for. One interesting assignment involves students visiting SHSU's Natural Sciences Collection where they are guided by curator Dr. Will Godwin and learn about evolutionary niches. In this project, students must model a creature they design to fill a niche that fits natural biology. Our final modeling assignments is a Partner Project. In this project, two students team up and model their partner in 3d but reflect a given 2d animated style. The second half of our semester, my students learn character rigging techniques by working with their partner project characters and rigging them to be animatable. Each rig has a set of requirements commonly found in character rigs and is intended as a primer to rigging as a field of interest. I cover topics such as Constraints, Inverse Kinematics, Forward Kinematics, Set Driven Keys, Blend Shapes, Reverse Foot Setups and Ribbon Spines.

ARTS 4355 is a course to introduce students to texturing and lighting concepts in 3d software packages. When I began in 2017, I taught the course using Mental Ray, a well-established rendering engine owned by Nvidia. However, in 2019, Nvidia discontinued Mental Ray software and I worked with SHSU's IT department to obtain and transition our PC Lab's over to Pixar's Renderman software. This software was given to SHSU by Pixar as part of their educational initiative and SHSU became a partner with Pixar. Since then, I have taught all instances of Shading Lighting and Rendering with Renderman. In this course I give students six assignments as I teach concepts covering lighting in 3d, material and shader creation, UV unwrapping, texturing, compositing, and batch rendering. In the course, we use Adobe Photoshop, After Effects and Substance Painter. The learning outcomes ensure students have experience in a variety of texturing approaches that can be applied in their future work.

I teach ARTS 4358 Portfolio each Spring Semester. In this course, students are prepared to graduate and enter the animation industry. Students are given assignments to expand their professional portfolio in a chosen field. I have four large projects that develop into portfolio pieces or short films. Additionally, I assign students research papers to explore the animation industry through studios and job postings. The

purpose of these exercises is to highlight industry opportunities. Students are also required to network with professionals in the field as well as create resumes, business cards, and cover letters for job postings. Each semester I hold a mock interview for the students to participate in. Lastly, our students create a final demo reel of their creative work.

I am proud to have had students' films from this class selected for festivals over the past five years. Indicators of success also include student employment in creative studios in the Houston, Austin and Dallas areas. Three of my students also have moved on to get their master's Degrees in Animation. Another former student was employed by NASA as an animator at the Kennedy space center.

Recently, I included a community engaged project into ARTS4358. Students were paired with residents of a local retirement home in Huntsville. The students interviewed and animated stories from the residents. These short videos were presented to the residents at the end of the semester and were given to the home. The reaction from the students and residents was overwhelmingly positive and will be continued next year. Additional indicators of success in my teaching have been multiple notifications of thanks from students in the form of notes, emails and messages received over the years. Graduates are asked to pick a faculty member that was most significant to them during their time at SHSU and I was selected seven times. Notification of these comes from the Office of Student Affairs in the form of a signed letter bearing the students' names.

To improve my courses each semester, I have several pedagogical approaches that I employ. In each of my courses, students have access to dozens of self-created video lectures, lessons, and tutorials to review as needed. These videos range from full lecture recordings to short "how-to's" for quick help. In my courses, critiques are always inperson with a constructive approach that focuses on what "Works, doesn't work and needs improvement". I show students avenues of improvement and encourage students to participate in these events. During our projects I meet with individual student's multiple times to check on their progress, we hold short concept and idea critiques and class progress check in's. I implement a system of student feedback where students fill out a short two question sheet each lecture, asking what did they learn and what do they need help on? I read these papers at the beginning of the next course meeting which gives students an informal opportunity to review concepts and information we discuss the class meeting prior. I have found this exercise helps students with concept retention compared to before giving out the sheets. This is an exercise that I employ in both Arts 3344 and Arts 4355. For each of my courses, I also employ a revision policy, allowing students an opportunity to regain lost grade points on an assignment after our critique. Another opportunity for students is an extra credit assignment, I ask students to network with industry professionals and interview them. This assignment has been incredibly popular among students that complete it. Lastly, I share my research projects with my classes each semester. I do this through modeling characters, creatures, and environments in my films to show my approaches to problem solving. I also show students how I personally approach tasks like rigging and texturing for my own films. Students that take each of my courses see characters progress from concept to model, to rig and textured character. This experience helps them understand the 3d pipeline and become better artists.