

San José State University
Animation/Illustration – Department of Design
27580 Ani 41 Intro 3D Modeling 04 Spring 2022

Course and Contact Information

Instructor:	Tom Austin
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Telephone:	
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Office Hours:	Tue/Thur 11:00 AM-11:30 AM
Class Days/Time:	Tu/Thur 3:00 PM
Classroom:	Art 222 (Zoom when Online)
Prerequisites:	Allowed declared Animation major only

Course Format

Important Web Pages and Class Messaging

ANI Program Google group (mandatory for ANI students): www.shmgoogle.com

Course Description (Required)

Emphasis is on generating an in-depth understanding of digital media using commercial 2-D and 3-D software. Students will be introduced to the underlying mathematical and conceptual processes of computer graphics.

The primary goal of this class will to teach the student 3D modeling as practiced in industry today. These methods will be applicable to all fields of the industry.

At the conclusion of this course, the student will be prepared for an internship, or possibly an entry level position depending on the student's focus and dedication. The student should have a basic understanding of working in a production pipeline/environment and two solid portfolio pieces. they should also feel comfortable creating almost any representational, non-organic object in 3D.

Our main software will be Autodesk's Maya, but the principals and practices could easily be applied to any other 3D modeling package. Maya is not only a 3D modeling program, but it is also a "hub" program. All things in production go in and come out from Maya.

While our main focus will be modeling and Maya, we will need to support our Maya endeavors with Adobe Photoshop, as well as, other programs.

Because of the nature of 3D, we will of necessity, have to spend lots of time on "technique" to arrive at realistic results.

This should never distract you from your primary mission to create good art! You will utilize all of your art training and add to it in this class.

There is no room to hide in 3D land! Your knowledge and depiction of form must be accurate as well as your breakdown and reproduction of the surface qualities of an object and how it interacts with light. There are no shadowy areas with which to hide your lack of understanding of light and form!

Part of operating within a professional environment is the ability to accurately re-create the object you are given, whether it be realistically or whimsically, you must map to the reference

Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:

1. Articulately discuss their work in public and receive and respond to public criticism in a positive manner.
2. Model using a Maya or like programs, any non-organic object in 3D, using current industry practices.
3. Create custom UV Mapping coordinates to facilitate the application of textures to their 3D objects.
4. Create custom textures using Maya, Photoshop, and Substance Painter.
5. Create appropriate presentation materials to showcase their work in a professional portfolio/reel.
6. Learn to work in a team environment, both as a team member and as a team leader.
7. Self-evaluate their work, and their strengths and weaknesses as they relate to studying the visual arts.

Required Texts/Readings (Required)

Textbook

No Text is required for this class

Other Readings

Digital Modeling, by William Vaughan

This book will sustain you for ANI 51A and ANI 130A and ANI 130B

ISBN-10: 0321700899

Autodesk Maya 2018, Murdock

ISBN-10: 0978-1-58503-917-9

Course Requirements and Assignments

In this class we will learn the basics of 3D Modeling. We will use Autodesk's Maya, but the techniques apply to most 3D packages. Maya is a broad program with many facets besides modeling. We will touch on the other functions as necessary, but will drill deep on the modeling side.

In addition to Maya, we will use Photoshop and a program called Substance Painter. A cursory familiarity with Photoshop is assumed, but Substance Painter will be examined in full.

The commercial application of 3D knowledge is most visible in the entertainment industry, with video games and film, but there are many other avenues, product advertising, military simulations, phone apps, etc.. The burgeoning field of 3D printing holds boundless potential for 3D modeling.

There will be major projects each weekend during the semester in addition to daily homework between all classes. All projects will be held to strict standards and a student's grade is dependent on how well they—and their team—meet these standards within the deadlines given.

For more detailed information about classroom activities, please refer to the handouts distributed each week for each project. Each assignment is designed to progressively and cumulatively build towards the above-listed learning outcomes. All of the above is subject to change with fair notice.

“Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.”

Final Examination or Evaluation

“Faculty members are required to have a culminating activity for their courses, which can include a final examination, a final research paper or project, a final creative work or performance, a final portfolio of work, or other appropriate assignment.”

Grading Information

- [University Syllabus Policy S16-9](http://www.sjsu.edu/senate/docs/S16-9.pdf) (<http://www.sjsu.edu/senate/docs/S16-9.pdf>)
- [University Attendance and Participation Policy F15-12](http://www.sjsu.edu/senate/docs/F15-12.pdf) (<http://www.sjsu.edu/senate/docs/F15-12.pdf>)

Determination of Grades

Students will be held accountable for meeting all deadlines with acceptable work. Directions given in class and for assignments must be followed accurately or grades will be lowered accordingly. Late work will not be excepted unless the instructor has given prior approval. Students are responsible for completing all work assigned during any absences, and absent students must make arrangements for their work to be turned in (on due date) and criticism recorded, by another student. No extra credit projects will be accepted for this class.

Class participation will be assessed and includes active engagement in critiques, intelligent questioning, peer mentoring, and proactive learning behavior.

Obviously, the quality of the work, both conceptually and its final execution, is the primary component of the grade; but as mentioned above, the student's grade is also determined by their professional attitude, their conduct, their work ethic, and their ability to meet their deadlines and the educational challenges posed by the assignments. Above all, students are graded on the intelligence they demonstrate while they pursue, question, attempt, evaluate, struggle, succeed and/or fail at their assignments.

While it is technically possible to pass this class with a grade as low as a D-, students should be aware that grades below the "B" range demonstrate a concerning lack of effort and are not considered even marginally adequate for pursuing a career in the entertainment or game industries; they also forecast poor professional prospects within our industry post-graduation. Students receiving grades of C+ or lower should therefore be on notice that their work as completed is barely adequate to graduate and better efforts are necessary if they are to pursue this field as a career. They may want to begin planning for a career path outside our industry.

Note that "All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades." See University Policy F13-1 at <http://www.sjsu.edu/senate/docs/F13-1.pdf> for more details.

Grades may be reviewed privately at any time by arranging a meeting with the instructor. If you want to know your grade—ask.

Late work due to class absence, or any other reason, will not be accepted for grading without prior authorization from the instructor well in advance of deadlines and only for reasons that conform to professional standards. Students are responsible for completing all work assigned during any absences, and absent students must make arrangements for their work to be turned in (on due date) by another student. If an absentee student turns in work, they should make arrangements with another student to take notes for them in regards to criticisms they need to address.

Students should expect that some assignments will continue to receive criticism requiring further work on their part for several weeks, or even months, past the original deadline for the project. Failure to incorporate such changes into their work will result in the work being considered "unfinished" in regards to grading.

“Incomplete” grades are only given rarely, and only in the event of compelling personal or family emergencies and/or crises. If you do receive an incomplete you will have to complete the work on your own and have one year to submit all final materials for consideration or your grade will revert to an F.

Grade Weighting:

Participation	10%
Progress	20%
Assignments	40%
The FINAL	30%

- A grades indicate excellent work.
- B grades indicate above average work.
- C grades indicate average work.
- D grades indicate below average work.
- F grades are failing.

- A plus = 100% to 97%
- A = 96% to 93%
- A minus = 92% to 90%
- B plus = 89% to 87%
- B = 86% to 83%
- B minus = 82% to 80%
- C plus = 79% to 77%
- C = 76% to 73%
- C minus = 72% to 70%
- D plus = 69% to 67%
- D = 66% to 63%
- D minus = 62% to 60%
- F = 59% to 0%

Students should expect and plan their schedules to accommodate significant “homework” periods after each class session. Students are expected to bring and maintain prepared materials and be ready to work at the beginning of—and throughout—each class session. Failure to do so will affect one’s grade. It is always the student’s responsibility to be prepared for class even if absent from the previous class.

Students will receive significant homework assignments every class, with potentially even assignments via email during the week. Several assignments may ultimately overlap at times, and students should expect a considerable amount of work in their final semester.

A final critique will be held on the final exam day in the usual classroom at the time and date indicated by the university final exam schedule. Please consult the sjsu.com website to reserve those times in your calendar immediately.

For further information about classroom activities, please refer to any handouts distributed for assignments. (Available on the CANVAS.)

Classroom Protocol

All Animation/Illustration students are expected to conduct themselves in a professional manner at all times. See the bulleted list below for general program policies and expectations.

Whether in class or working after hours, students must respect the facilities and fellow students and are expected to present themselves and their work in a clean professional manner. Students will be held accountable for both classroom participation and contributing to the creation of a positive atmosphere for education.

Classes and events are to be treated as business appointments and students are expected to be in attendance, fully prepared, and on time. Fully prepared means having all necessary materials needed to work on class projects, having prepared according to instructions, and having made significant progress on assignments from the previous class. Failure to accomplish any of the above will significantly lower your grade.

The occasional absence is unremarkable, but if an absence is unavoidable, students are expected to notify the instructor immediately, and contact their peers to both turn in work on the due date and stay current with class assignments they may have missed.

Cell phones should be silent and should not be utilized during class unless otherwise directed. Students should refrain from eating food others can smell. At the end of classes, students are expected to leave the classroom cleaner than they found it, push in chairs, etc. During breaks and immediately before and after class, students should be conscious of the overall noise level in the room and try to minimize it in order to allow for the private instructor/student conversations that often occur.

Finally, students should maintain an awareness of the safety of their surroundings, belongings, and classmates. In particular, when working in the building and entering or leaving after hours, students should accompany one another in the interest of safety or call the University Police for an escort. Report any suspicious persons or behavior to the University police at 408-924-2222 or by picking up a blue emergency phone.

Animation/Illustration Program Policies

- Students must arrive to class on time with materials ready to work.
- Cell phones must be silenced.
- Private conversations during lectures and class discussions are not permitted.
- No checking email or using laptops for activities unrelated to the class.
- No playing personal audio through speakers, use headphones only.
- Do not prop open any doors.
- Do not leave valuable items unattended.
- Do not leave the classroom without cleaning your area.
- Be courteous to others, keep private conversations quiet.
- Aromatic foods are not allowed in any of the classrooms or labs.
- Please be attentive to your personal hygiene.

Computer Labs: Violation of rules will result in loss of lab access for the whole semester

- No food or beverages by the workstations.
- Do not change the connections on the equipment.
- Do not move any equipment in the lab.
- No traditional painting.

University Policies

Per University Policy S16-9 (<http://www.sjsu.edu/senate/docs/S16-9.pdf>), relevant information to all courses, such as academic integrity, accommodations, dropping and adding, consent for recording of class, etc. is available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at <http://www.sjsu.edu/gup/syllabusinfo/>

Course Number / Title, Semester, Course Schedule

Course Schedule

Week	Topics, Readings, Assignments, Deadlines
1	
1	Assign Model with Color Map
2	Model with Color Map due
2	Assign Creating your own door
3	Progress due
3	Creating your own door due. Assign Front Door and Frame
4	Progress due
4	Front Door and Frame Due Assign Clean Up Doors
5	Progress due
5	Clean Up Doors Due Assign Object Model
6	Progress due
6	Object Model Due Assign Lighting and Rendering
7	Progress due
7	Lighting and Rendering Due Assign Block in and Test Paint
8	Progress due
8	Block in and Test Paint Due Assign Clean up and Combine Maps
9	Progress due
9	Clean up and Combine Maps Due Second Object
10	Spring Recess
10	Spring Recess
11	Progress due
11	Second Object Due Assign Group Project wk1
12	Progress due
12	Group Project wk1 Due Assign Group Project wk2

13		Progress due
13		Group Project wk2 Due Assign Build Village
14		Progress due
14		Group Project wk2 Due Assign Build Village
15		Progress due
15		Build Village Due Put Village in to Unreal
Final Exam		Rm 222 and Time 9:45 am