

San José State University
School/Department
ANI 10-01, Light & Optics, Spring 2022

Course and Contact Information

Instructor:	Katerina Spaeth
Office Location:	Online
Telephone:	(Email only please)
Email:	katerina.tadenev@sjsu.edu
Office Hours:	Email for appointment
Class Days/Time:	Section 01: F 8:30 a.m. – 2:40 p.m.
Classroom:	(Via Zoom then at ART 243)
Prerequisites:	Allowed Declared Majors: Animation

Course Format

Technology

As with most courses in the program, this class will require use of the Zoom, Adobe Creative Suite, and potentially other programs as well. Also, students will utilize Google Drive, Google Groups, and other technologies, to complete some assignments.

Class Messaging

Check Canvas Regularly, assignments will be posted and turned in there.

[Google Group ANI10_05](#): Important course materials such as the Syllabus, Assignment Handouts, Examples, Limited Zoom Recordings and Back-up materials.

https://groups.google.com/forum/#!forum/ani10_sjsu. All A/I students are also expected to join and monitor the [SJSU ANI Google Group](https://groups.google.com/forum/#!forum/sjsu-ani) (<https://groups.google.com/forum/#!forum/sjsu-ani>)

for important announcements to our majors. Students are responsible for regularly checking email for class messages.

Course Description

An investigation into the physical properties of light and optics relevant to the visualization of artwork for the screen arts industry.

Course Learning Outcomes

1. Understanding the way light works and how physics relates to art.
2. Comfort in constructing and shading simple as well as complex forms.
 - a. Perspective and Spatial Thinking
 - b. Understanding of light vs. shadow.
3. Storytelling with art.
 - a. Forms of contrast and Composition.
4. Building art habits for mental serenity, motivation and ultimate success.
 - a. Understanding how to get the most out of feedback loops.
 - b. Building a support system amongst your peers. Building good art habits together.
 - c. Building efficient art processes to minimize frustration.

Required Texts/Readings

Textbook

*No required text for this course, however students are expected to consult various books, websites and blogs to supplement their education. **YOU WILL MAKE A TEXTBOOK.***

Suggested Readings (Art Skills)

- [*Color and Light* by James Gurney](#)
- [*Imaginative Realism* by James Gurney](#)
- [*How to Draw* by Scott Robertson and Thomas Bertling](#)
- [*How to Render* by Scott Robertson and Thomas Bertling](#)
- [*Science of Creature Design* by Terryl Whitlatch](#)
- [*The Art of Animal Drawing* by Ken Hultgren](#)

- [*Daily Painting* by Carol Marine](#)
- [*Colour* by Hazel Rossotti](#)
- [*Perspective Drawing Handbook*, Joseph D'Amelio](#)
- [*Rapid Viz*, Larry Belliston and Kurt Hanks](#)
- [*Perspective Drawing*, Ernest Watson](#)
- [*Rendering in Pen & Ink*, Arthur Guptill](#)
- [*Rendering in Pencil*, Arthur Guptill](#)
- Any of the "Art of" Books like

Other Readings (Habits and Mindset)

- [*The Power of Habit*, Charles Duhigg](#)
- [*Mindset*, Dr. Carol Dweck, ISBN 345472322](#)
- [*Make it Stick*, Peter C. Brown, ISBN 978-0674729018](#)
- [*Talent Is Overrated*, Geoff Colvin, ISBN 9781441605368](#)

Other equipment / material requirements (optional)

See course supply list provided on the first day of the semester.

Other Technology Requirements / Equipment / Material

Students are expected to have an available laptop (PC or Mac) the Adobe Creative Suite, and access to the Microsoft Office Suite or equivalent. Regardless of platform or input, the laptop should be well-prepared for high-end graphics processing, and capable of videoconferencing (video and audio) via Zoom.

Library Liaison (Optional)

For assistance in finding library resources, you may consult:

<http://libguides.sjsu.edu/animation>

and/or contact MLK Librarian Elisabeth Thomas.

elisabeth.thomas@sjsu.edu, or 408-808-2193.

Course Requirements and Assignments

Light & Optics focuses on the professional and technical skills needed to create effective illustrations without the benefit of direct reference material. These skills are derived from an understanding of the physical properties of light and optics, including volumetric drawing, linear perspective, atmospheric perspective, and rendering techniques.

Graphite will be the primary medium used during the class. Emphasis will be placed on executing every assignment as described with a high degree of competence and accuracy. Failing

to correctly follow the detailed instructions for each assignment will have a significant negative effect on your grade over time.

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.

During the semester, students will be assigned:

- HW assignments. Cumulatively ~25% of final grade.
- In-Class Assignments. Cumulatively ~10% of final grade.
- 4-5 renderings (Tower Projects) of geometric solids ~25% of your grade.
- 2 multi-week major renders: midterm and final project.
 - Each ~10% of your grade.
- "333" Feedback Loops for Towers and Castles: ~5%
- Class notebook ~15% of final grade.

Final Examination or Evaluation

The class “final” will consist of a portfolio of the semester's work, a final project critique, and potentially, an in-class exam, depending on the given semester.

Grading Information & 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 accepted 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. However, be aware that since many of the grades will not be arrived at until the final day of class (~90% will be subject to final day submissions, etc.) it is difficult to say definitively what your grade will be until all the work is submitting at the end. Rest assured, in this class, most people have a good idea of where they are relative to their peers and my expectations. Focus on your efforts, not your grades, for best results.

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.

Grading Percentage Breakdown

93.34% and above = A
93.33% - 90% = A-
89.99% - 86.67% = B+
86.66% - 83.33% = B
83.32% - 80% = B-
79.99% - 76.67% = C+
76.66% - 73.33% = C
73.32% - 70% = C-
69.99% - 67.67% = D+
66.66% - 63.33% = D
63.32% - 60% = D-
59.99 and below = F

Please note:

A = Excellent or Superior work; work of a top professional standard

B = Above Average; Respectable effort or results, with relatively minor flaws or corrections necessary.

C = Average; More effort necessary on the part of the student, obvious flaws, obvious corrections necessary.

D = Below Average; Poor effort and results

F = Failure; Exceptionally Poor effort and/or results.

- **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.
 - Not all Zoom Recordings will be shared. Make sure you participate in the virtual classroom and show up.
- **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 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 handouts on Google Drive as well as Canvas.**

Classroom Protocol

All Animation/Illustration students are expected to conduct themselves in a professional manner at all times, whether in person or online.

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, fully engaged, 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.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

Academic Integrity policy (Academic Senate Policy F15-7)

The University's Academic Integrity policy, located at <http://www.sjsu.edu/senate/docs/S07-2.pdf>, requires you to be honest in all your academic coursework. Faculty members are required to report all infractions to the Office of Student Conduct and Ethical Development. The Student Conduct and Ethical Development website is available at <https://www.sjsu.edu/studentconduct/>

- **Instances of academic dishonesty will not be tolerated by the Animation/Illustration program. Cheating on exams, plagiarism, presenting the work of another as your own, or the use of another person's ideas without giving proper credit will result in AUTOMATIC EXPULSION FROM AND FAILURE OF THE COURSE, with possible expulsion from the Animation/Illustration Major. A second offense will result in IMMEDIATE EXPULSION from the Animation/Illustration Major.**
- **This includes but is not limited to copying someone else's imagery, altering someone else's imagery, altering a pre-existing 3D model, tracing or copying animation, and submitting someone else's notes for a grade.**
- **Your Final Notebook has to be your own!**