

ANI 12: Light & Optics

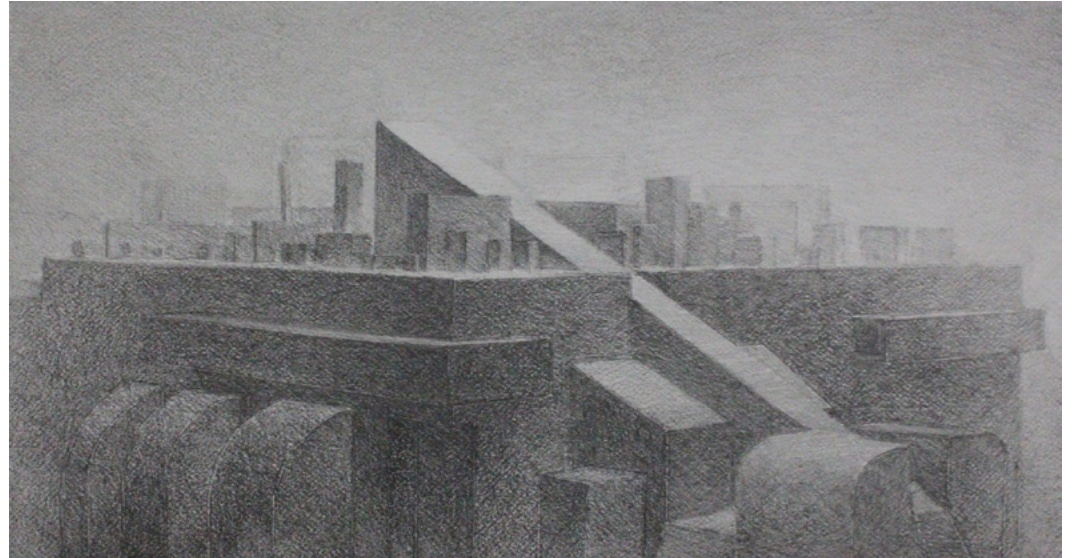
Course Overview

SJSU Animation/Illustration majors must be capable of creating convincing and sensical illusions of imagined 3D spaces in a 2D plane, often without the benefit of direct observation, or even photo reference.

To do so, in **ANI 12 Light & Optics**, SJSU A/I students acquire considerable knowledge of the actual physics of light and optics, and considerable practice in employing this knowledge to create believable images. ANI 12 is a first-semester foundation-level course within our program.

In-depth topics include: the fundamental physics of both light and optics as they apply to the visual arts, atmospheric perspective, linear perspective and geometry, value scales, lighting, B+W rendering in dry media to a near-photographic quality finish, mechanical draftsmanship, freehand perspective sketching from imagination and life, creating original photo reference, presentation and craftsmanship of projects, and the overall process involved in creating a complicated realistic illustration. (ideation, thumbnails, value studies, mechanical drawings, rendering, presentation, criticism.)

A key point for articulation purposes is that while this course may at first glance seem equivalent to drawing courses in which students draw simple geometric solids and still-life compositions in tone, this is not the case. Students must be able to achieve highly realistic effects and representations, but without direct visual observation of a still-life or object.



ANI 12: Minimum Standards

For articulation purposes—at a minimum—students would be expected to possess demonstrable competency with the following skills:

- Able to draw a correct “perfect” cube from any angle, with any amount of foreshortening, completely from imagination, with or without using mechanical methods.
- Able to envision—and correctly draw and render—shadows and tonal gradations across the planes of such a cube from any given light source.
- Able to draw correct ellipses on any face of a cube regardless of orientation, with or without using mechanical methods.
- Ability to create a convincing illusion of 3D forms and space in a 2D plane, with textural and atmospheric perspective effects, using only tonal drawing tools in traditional dry media.
- Mastery of linear perspective fundamentals.
- A fair understanding of the physics underlying the optics of vision and atmospheric visual effects. (“Why the sky is blue”, “Angle of Incidence”, reflection, matte v. glossy surfaces, etc.)



Alternative Means of Credit

SJSU A/I is aware that most schools do not offer any courses that are clearly equivalent to this course. Thus, it is possible that a given student may arrive at SJSU with the prerequisite skills, but without the formal course credit. To address such situations, SJSU A/I is prepared to test incoming students for the competencies expected for this course. Such tests can be conducted during the first week of any given semester. Successful applicants can have the course waived in favor of an elective of their choice.

