

Photography & Reality

SYLLABUS

SATURDAYS - ONCE A MONTH FOR ONE YEAR - 14:00 - 17:00 EST
16TH OF JANUARY TO THE 18TH OF DECEMBER, 2021

<https://us02web.zoom.us/j/84813572934>



Photography and Reality is a course exploring light and color in nature and the philosophical questions evoked by the act of photographing the world. Through a series of lectures and assignments in the outdoors participants will become physicists in the sense originated by Aristotle - as "students of nature." By studying nature we also learn to study ourselves and how we come to acquire knowledge of the world. Emerging from this epistemic question is the even greater puzzle of why as artists we choose to "capture" scenes in nature and reproduce them for other humans to observe.

The class is an effort to unite the seemingly diametrically opposed fields of physics and philosophy, technology and aesthetics. The year will begin with the separation of light and dark with experiments demonstrating basic optics readily found in the outdoors. As spring arrives the topic changes to color as it manifests in nature and our experience of it in vision. These topics mature during the summer into the philosophical problems of the experience of sensory information as explored in philosophy and photography. Finally, in the autumn the disparity between art and science will be reconciled in the subject of linear perspective - particularly in the nonexistent line of the horizon.

Each class will include a lecture but also time for participants to share their discoveries from the homework in the form of photographs or stories. Most importantly participants are asked to select a location at which to perform a year long light study.



APOLOGIA:

While much of the content of this course comes from my Science of Cinematography class the rest comes from my own interests and personal studies in philosophy. My hope for several years has been to weave these disparate strands together into a grand design. I am taking this year as an opportunity to finally do this through this class. As with any new class there are great successes and failures. I ask you be patient with the new material, but also speak up about any ideas you have to benefit the course.



TEXTBOOKS:

Additional readings will be supplied throughout the class in pdf form. I may add additional textbooks later in the year, but will give many months notice so they can be acquired.

Gooley, Tristan. *The Lost Art of Reading Nature's Signs: Use Outdoor Clues to Find your Way, Predict the Weather, Locate Water, Track Animals - and other Forgotten Skills*. New York: The Experiment, 2014.

Minnaert, M.G.J. *Light and Color in the Outdoors*. New York: Springer-Verlag, 1993. This version includes color photos but is pricey. A less expensive edition is published by Dover and is titled *The Nature of Light and Colour in the Open Air*. Both editions will work for this class as the text and black & white illustrations are the same.

Shlain, Leonard. *Art & Physics: Parallel Visions in Space, Time and Light*. New York: Harper Perennial, 2007.



LIGHT STUDY AND ASSIGNMENTS:

Each month will include an optional homework with reading assignments, selected experiments, and questions for writing and reflection.

Throughout the year you should perform a Light Study. Choose a specific interior or exterior location that has an interesting quality of light throughout the day and throughout the seasons. Document the scene with a still camera at three times of day; sunrise, noon and sunset.

Pick a location that is easy for you to gain access to throughout the day. Please take into account that you are performing this during a pandemic so make sure travel to and from this place is safe even during the early morning. Details will be spelled out in the first homework assignment of the





IMPORTANT NOTES:

- * Please sign in early and give yourself enough time to be ready. I have a lot to cover which means I will start each class on time.

- * Due to the large class size you will be muted upon entry. If you unmute to ask a question please make sure to mute again.

- * I will stop at specific moments to see if anyone would like clarification on the material just covered. If you have a question that is not immediately relevant please submit it to the `CHAT` section or ask at the end of class. I will spend time at the end of class addressing these further questions and may choose to follow up with answers in a group e-mail the day after.

- * Since our homes have become places of education and work please be tolerant of interruptions that may happen. Many classmates have children and sometimes my cats decide to get in the way.

- * By signing into this class you are agreeing to let us record it for our own records. We will not disseminate the recording in any form, but use it as research for improving future offerings of the class whether online or in person. The recording will be available online to those who signed up.

- * No part of this course, electronic or print may be reproduced or transmitted without written consent of the author. If you know someone interested in these material please put them in touch with us!



LEARNING GOALS:

- * To connect artists with the phenomenon of the natural world in the observation and study of light, color, the sky, weather, plants and animals.

- * To provoke deep questions about the connection between our senses and the world.

- * To transform our ideas about what it means to *take* a photograph and the purpose of this artistic gesture as a part of humankind and the world.



Winter - Point of Origin

16TH OF JANUARY - "CELESTIAL CLOCK"

Humankind understands time through the relationship between their position on earth and the sun. This class will look back at ancient experiments that will help you understand how the sun and moon move in the sky, and leverage this for lighting exteriors. The class also begins our communal year long light study.

20TH OF FEBRUARY - "LIGHT IN EXTENSION"

Dappled light through the leaves of a tree or a column of light on water from a distant building are not only objects of contemplation, but an encounter with the laws of physics. Together and in the homework we will explore the laws of optics through observations of reflection and refraction in the natural world.

20TH OF MARCH - "SHAPE AND SHADE"

Capturing the illusion of three dimensions on a two dimensional canvas is the invention of the Renaissance. Looking back at both the artistry of Leonardo's sketches and Johann Lambert's synthesis of photometric equations we can better understand the complex interaction of light and dark.

Spring - Multiplicity

17TH OF APRIL - "NATURE'S PALETTE"

Ancient studies of color began in nature with rainbows and glories found in the effects of light and weather. As the weather warms and spring showers arrive we will study the many ways in which color manifests in light, stones, plants, and weather.

22ND OF MAY - "COLOR DEFINED"

Humankind has struggled to understand color through two methods; physics and art. In an effort to see these methods of two sides of the same coin we will survey a diverse set of "color theories" from both scientists and artists in order to map out a common ground.

19TH OF JUNE - "INTERNAL COLOR"

Color is not independent of us. There is no singular 'color truth.' After looking at the physiology and psychology of our experience of color we will look carefully at the language of color. This serves as an introduction to the philosophical problems of our knowledge and experience of the world.

Summer - Transformative Flux

17TH OF JULY - "THE 3RD WAY"

The Austrian philosopher, Ludwig Wittgenstein, made the important observation that the appearance of the sun's motion in the sky can be interpreted as both a geocentric model and a heliocentric model. So how do we come to truly *know* the world? This question is the key to the doorway of phenomenology.

21ST OF AUGUST - "NATURE'S LABYRINTH"

Quantum Mechanics is one of the most successful theories in physics but it continues to baffle with its paradoxical labyrinths of ideas. After looking at some simple Q-M experiments and what it reveals about the nature of reality we can turn the problem towards our own art - what does a photograph tell us about reality?

18TH OF SEPTEMBER - "TIME AND MOTION"

Einstein's theories of Special and General Relativity transformed the way in which we understand time, shape, and space. Through the art of cinema we can probe the fixed, transmutable, or possibly nonexistent nature of space and time.

Autumn - Infinite Return

16TH OF OCTOBER - "OUR EYES GIVE IT SHAPE"

As photographers we work with two visual systems; that of our body and that of the camera system. Building upon our phenomenological experience of reality we can now look at the experience of creating and seeing a photograph in new light. This reappraisal of our craft gives us insight into the *strange tool* that is art.

20TH OF NOVEMBER - "THE HORIZON"

Returning back to the scientific study of light and shade this class will explain linear perspective and its philosophical implications. Through a geometrical analysis of the world we arrive at a curiously nonexistent line where the land and sky only appear to meet - the horizon.

18TH OF DECEMBER - "POINT OF ORIGIN"

We are each a point of contemplation in the cosmos - letting light enter our body to experience reality as well as projecting our understanding out into time and space. Where does art fit into this ouroboros and how does it allow us to find our place in nature?