

Syllabus

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Instructor

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Description

Photography is a popular hobby that has exploded in recent years as digital cameras have become more affordable and easier to use. There are many courses that will teach students the artistic aspect of "how to become a better photographer" or "how to improve your eye", and this is not one of them. Instead, you will become a better photographer through an understanding of the technical aspects and terms of a digital camera, from the one-time-use to the professional. Learn why your photos look blurry at night, why color management is important, what the difference between "sports mode" and "portrait mode" on your camera's dial are, and how to manipulate the camera without the need of these modes in the first place. Topics include exposure and metering, flash, dynamic range, CMOS and CCD sensors, color filter arrays, RAW versus JPEG formats, color spaces and profiles, editing photos with Photoshop, and optical and computational artifacts. Through lectures and hands-on assignments, students will understand the jargon and compromises of digital photography that ultimately expose the workings of digital cameras. Students are not required to own a digital camera, but if you bring one, one with a "manual" mode and an option for "RAW" is recommended.

Course Expectations

Students are expected to attend all lectures, complete 4 problem sets, 4 projects, and produce a final project.

Cameras

You are not required to own a digital camera for this course; we have a limited number of digital cameras that you may use for hands-on assignments. Of course, if you wish, you may bring your own. Any camera will allow you to begin the course, but the following features are recommended if you wish to use the same camera for the duration of the course:

Manual mode. Having the ability to set exposure manually in the camera is important for this course. Exposure is addressed early in the course, so you may find that you will quickly outgrow cameras that do not have this feature.

RAW image file format. Although not used initially, RAW file format will be important for later assignments in the course. It is usually explicitly stated in a camera's specifications whether or not it supports this format.

Although not required, if you do decide to use this course as an excuse to purchase a new camera, be sure it has the above features. While we cannot recommend specific cameras due to the sheer number of available options and variables involved in the decision, our advice would be to purchase a camera with features that seem just beyond your capabilities. This way, you will have room to grow into it and you will have more flexibility with it in the long-term.

Below are a couple of websites you may try when considering purchasing a digital camera:

<http://www.dpreview.com> - Contains in-depth reviews of many cameras.

<http://imaging-resource.com> - "Find the Best Camera For You" may assist you in picking a camera.

Website

The website for this course is located at:

<http://cse7.org/>

Staff

Use the address below to email the entire staff:

staff@cse7.org

Textbooks

There are no required textbooks for this course. We do, however, recommend the following texts to supplement your learning:

The Camera (Ansel Adams Photography, Book 1)
Ansel Adams, Robert Baker
Bulfinch Press (1995)
ISBN: 0821221841

The Negative (Ansel Adams Photography, Book 2)
Ansel Adams, Robert Baker
Bulfinch Press (1995)
ISBN: 0821221868

Exposure & Lighting For Digital Photographers Only
Michael Meadhra, Charlotte K. Lowrie
Wiley Press (2006)
ISBN: 9780470038697

The Adobe Photoshop CS5 Book for Digital Photographers
Scott Kelby
New Riders Press (2010)
ISBN: 9780321703569

Lectures

Lectures are held most Mondays from 5:30 PM to 7:30 PM in Sever Hall room 202.

August 29, 2011

Lecture 1: Welcome!

September 5, 2011: *No class (Labor Day)*

September 12, 2011

Lecture 2: Software Tools & Light

September 19, 2011

Lecture 3: Exposure

September 26, 2011

Lecture 4: Exposure (continued)

October 3, 2011

Lecture 5: Optics

October 10, 2011: *No class (Columbus Day)*

October 17, 2011

Lecture 6: The Histogram

October 24, 2011

Lecture 7: Software Tools (continued)

October 31, 2011

Lecture 8: Movie Night!

November 7, 2011

Lecture 9: Digital Cameras

November 14, 2011

Lecture 10: Digital Cameras (continued)

November 21, 2011

Lecture 11: Color

November 28, 2011

Lecture 12: Artifacts

December 5, 2011

Lecture 13: Even More Software Tools

December 12, 2011: *No class*

December 19, 2011: *No class (Final Projects Due & Computer Science Fair)*

Sections

Optional sections allow students to go over lecture material and ask questions on lecture topics and assignments with the teaching fellows. A schedule of sections will be found on the course's website after the class begins.

Grades

The final grade for credit students will be determined with the following weights.

Problem Sets: 25%

Projects: 40%

Final Project: 35%

If you elect to take this course not-for-credit, you are not expected to submit any of the above. However, we welcome you to submit your work for feedback as we believe your skill as a photographer will best increase with persistent practice.

Problem Sets

Four problem sets will be distributed throughout the semester. Their content will consist primarily of theory-based questions. The problem sets will be due by 5:30 PM on the date listed and, unless otherwise noted, will be released two weeks prior to their due date.

Problem Set 1 Due September 26, 2011.

Problem Set 2 Due October 31, 2011.

Problem Set 3 Due November 14, 2011.

Problem Set 4 Due December 5, 2011.

Projects

Four photograph-based projects will be distributed throughout the semester. Each project will be due by 5:30 PM on the date listed and, unless otherwise noted, will be released two weeks prior to their due date.

"Keep an I[SO] Out." Due September 19, 2011. (Released: August 29, 2011)

"Great (Focal) Lengths." Due October 17, 2011.

"Frames of Mind." Due November 7, 2011.

"Raw Material." Due November 28, 2011.

Final Project

A final project must be completed and will count for a significant portion of the final grade. The guidelines for the final project will be released during the semester, with student proposals for projects due shortly thereafter.

This semester will conclude with an exhibition of final projects and images on Monday, December 19 2011, from 5:30 PM until 7:30 PM. The exhibition will be an opportunity to mingle with classmates, see each other's work, and eat cake.

A schedule for guideline release and due dates is below, but is subject to change.

Guidelines Released:	12:00 PM (noon) on October 24, 2011.
Proposals Due:	12:00 PM (noon) on November 21, 2011.
Final Project Due:	12:00 PM (noon) on December 19, 2011.
Exhibition:	5:30 PM – 7:30 PM on December 19, 2011. Location to be determined.

Exams

There are no exams in this course.

Late Policy

Extensions on any assignment or final project due date will not be granted except in cases of emergency. Technical difficulties do not constitute emergencies. Any assignment or final project submitted late will be accepted but will have a percentage of the grade subtracted based on its tardiness after the due time:

Up to 12 hours:	25%
Over 12 hours:	100%

Lateness will be determined down to the minute based on the completed submissions' timestamps on nice.fas.harvard.edu.

Academic Honesty

All work that you do toward fulfillment of this course's expectations must be your own unless collaboration is explicitly allowed (e.g., by some problem set or the final project). Viewing or copying another individual's work (even if left by a printer or stored in a public directory) or lifting material from a book, magazine, website, or other source—even in part—and presenting it as your own constitutes academic dishonesty, as does showing or giving your work, even in part, to another student.

Similarly is dual submission academic dishonesty: you may not submit the same or similar work to this class that you have submitted or will submit to another. Moreover, submission of any work that you intend to use outside of the course (*e.g.*, for a job) must be approved by the staff.

All forms of cheating will be dealt with harshly.

You are welcome to discuss the course's material with others in order to better understand it. You may even discuss problem sets with classmates, but you may not collaborate by showing other students your work. If in doubt as to the appropriateness of some discussion, contact the staff.