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 assignments 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 CS3 Book for Digital Photographers
Scott Kelby
New Riders Press (2007)
ISBN: 9780321501912

Lectures

Lectures are held most Mondays from 7:35 PM to 9:35 PM in Sever Hall room 202.

January 26, 2009
Lecture 1: Welcome!

February 2, 2009
Lecture 2: Software Tools

February 9, 2009
Lecture 3: Light & Exposure

February 16, 2009: *No Class (President's Day)*

February 23, 2009
Lecture 4: Exposure (continued)

March 2, 2009
Lecture 5: Optics

March 9, 2009
Lecture 6: The Histogram

March 16, 2009
Lecture 7: Software Tools (continued)

March 23, 2009: *No Class (Spring Break)*

March 30, 2009
Lecture 8: Assignment Slideshow and Movie Night!

April 6, 2009
Lecture 9: Digital Cameras

April 13, 2009
Lecture 10: Digital Cameras (continued)

April 20, 2009
Lecture 11: Color

April 27, 2009
Lecture 12: Artifacts

May 4, 2009
Lecture 13: Even More Software Tools

May 11, 2009
Lecture 14: Assignment Slideshow and Legalese

May 18, 2009: *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 can be found on the course's website.

Grades

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

Assignments: 60%

Final Project: 40%

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.

Assignments

Four assignments will be distributed throughout the semester. Each assignment will have at least two required parts for submission: a problem set with theory-based questions and a collection of images. A selection of submitted photographs will be compiled and shown in special lectures during the course.

The assignments will be due by 7:35 PM on the date listed and will be released three weeks prior to their due date.

"Keep an I[SO] Out."   Due February 23, 2009.

"Great (Focal) Lengths."   Due March 16, 2009.

"Frames of Mind."   Due April 6, 2009.

"Raw Material."   Due April 27, 2009.

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 the "Computer Science Fair" on Monday, May 18 2009, from 6:30 PM until 8:30 PM. A course-wide exhibition of final projects held jointly with CSCI E-75: Building Dynamic Websites, the Fair 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 March 30, 2009.
Proposals Due:	12:00 PM (noon) on April 20, 2009.
Final Project Due:	12:00 PM (noon) on May 18, 2009.
Computer Science Fair:	6:30 PM – 8:30 PM on May 18, 2009.

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:	10%
12 to 24 hours:	25%
24 to 48 hours:	50%
Over 48 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.