

## COLOR II

Spring 2005, Parsons School of Design  
Wednesday 3-5:40  
PUPH 1007 C 1871  
Room 602, Building L  
Color I darkroom, 5<sup>th</sup> floor, Building N

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**Description:** This course follows Color I, incorporating the theoretical and technical instruction from the previous class. Using their knowledge of color theory, film exposure, and digital technologies, students will learn how to print color photographs in the darkroom, and how to correctly evaluate color balance. This class will focus on the development of a relationship with color in one's own work. Students will participate in critiques in order to facilitate deep thinking about their practice, and will produce a coherent body of work.

### Course Outline:

Topics – color printing in the darkroom, evaluating color balance, development of own work  
Activities - lecture, discussion of conceptual issues, lab time, and critique  
Assignments - photography projects, a three page essay, an exhibition review

### Course Objectives:

Things you should have an understanding of when you complete this course: How to print color photographs in the darkroom, how to evaluate density, contrast, and color balance, how color effects the message and meaning of a photograph, what role color plays in one's own practice.

### Grading:

Evaluation and grading will be based on:  
Attendance (15%), participation in class discussions and critiques (5%), a three page research paper (including a rough draft) (15%), print assignments and showing work in critiques (20%), and a final project (including a proposal) (45%).

### Required Reading: (on reserve at Gimbel Library)

*Exploring Color Photography*, Third Edition, by Robert Hirsch (McGraw Hill, 1997)

Recommended:

*Color Photography: A Working Manual*, by Henry Horenstein (Little, Brown and Co., 1995)

Other readings will be handed out in class

Students are expected to attend classes regularly and promptly. Faculty members are expected to fail any student who is absent for a significant portion of class time – defined as three absences for classes that meet once a week.

*For Parsons School of Design Academic and Attendance Policies, please refer to the Student Handbook.*

## Class Schedule

- 1/26** Introduction: Color printing in the darkroom  
The subtractive method (CMYK) of filtration, exposure and processing of color paper  
Darkroom orientation  
**Assignment:**  
Print 3 or more 8x10 glossy color prints to show me in the next class (even though we will meet in the darkroom). The negatives you print should have been taken in natural daylight, with an obvious neutral tonality in it – e.g. skin tone, grey cement, wood, white highlights– so it is easier to balance correctly. Bring in your contact sheets, test strips, and test prints.  
**Readings:**  
Required Reading:  
Chapter 10, “Printing Color Negatives,” in *Exploring Color Photography*, Third Edition, by Robert Hirsch (McGraw Hill, 1997)  
Suggested Reading:  
Chapter 4, “Making Color Prints,” in *Color Photography: A Working Manual*, by Henry Horenstein (Little, Brown and Co., 1995)
- 2/2** In the darkroom  
Work on printing and color evaluation  
**Assignment:** Print one 8x10 glossy color print at what you determine to be the correct color balance. Print 6 versions that vary from that color balance– making a version +10 M, +10 M and +10 Y, +10 Y, -10 Y, -10 Y and -10M, -10M. This is so you can see the changes and evaluate color more closely. Bring them to the next class, including tests.
- 2/9** In the darkroom  
**Assignment:** Print 3-5 8x10 glossy color prints and bring them to the next class for critique. Bring your test prints –two or more per print – so that we can compare the color balance and evaluate your choices.
- 2/16** Critique  
Slide show: Artists using color in their photographic practice  
**Assignment:** Final project proposal due in the next class
- 2/23** In the darkroom  
\*Final Project proposal due  
**Assignment:** Bring work in progress to the next class for critique
- 3/2** Critique  
Discuss project proposals  
**Assignment:** Bring work in progress to the next class for critique
- 3/9** Guest Lecturer: Zoe Crosher, Photographer and Managing Editor of Afterall Journal  
Critique  
**Assignment:** Bring work in progress to the next class for critique  
Exhibition review due in next class
- 3/16** Critique  
\*Exhibition review is due  
**Assignment:** Rough draft of essay is due in next class

- 3/23** Spring Break
- 3/30** In the darkroom  
\*Rough draft of essay due  
Sign up for critiques – either 4/13 and 5/4 or 4/20 and 5/11  
**Assignment:** Bring work in progress to the next class for critique – depending on which days you signed up for
- 4/6** Critique I
- 4/13** Critique II  
**Assignment:** Final draft of essay due in next class
- 4/20** Review Week  
\*Final draft of essay due  
**Assignment:** Bring work in progress to the next class for individual critique
- 4/27** In the darkroom - Individual meetings in the classroom  
Review final projects and essays  
**Assignment:** Final project due in the next two classes for critique
- 5/4** Final Critique I
- 5/11** Final Critique II

## **COLOR II**

### **Technical Information**

#### **Darkroom List:**

To check out at the cage:

Lens – 50 mm focal length for 35mm, 80 mm for 6x6

Easel – 11x17, 16x20

Negative carrier – full frame (black border) or filed (rough black border)

Grain focuser

To supply yourself:

Color photo printing paper

Negatives in plastic sleeves

Kodak Color Print Viewing Filter Kit (\$24-30)

Canned air

Notebook

Pen

Scissors

Tape

Exposure device

#### **Suggested color film and printing paper:**

Kodak Portra C-41, VC or NC daylight balanced, 160 or 400 ISO; Fuji or Agfa equivalent

Kodak Supra Endura F (surface code F=glossy) 8x10 box of 100 sheets; Fuji or Agfa equivalent

Color paper comes in many surfaces – glossy, semi-matte or pearl, matte – that effect the quality of your print. Choose the surface to suit your subject matter and the quality of your negative.

Color paper is sensitive to heat and is kept refrigerated at the store. You can keep yours in the fridge as well, but if you use it quickly you do not need to. If you do refrigerate unused paper, keep it in a tightly sealed plastic bag. Do not open the box or bag right away – let it come to room temperature before you use it to avoid condensation damage (about 3 hours for 8x10 100 sheets).

Like color film, the emulsion of color paper varies in color consistency and light sensitivity from one box to the next – even in the same brand. If you are making many prints in the same series and need to be super consistent, buy multiple boxes of the same batch number (on box).

#### **Diachronic color head enlargers:**

Always zero out all filter knobs before dialing in your starting filtration. Keep the Cyan knob at OOO – you will not use Cyan for color negative printing. Never force the knobs past OOO. When you zero out all of the filtration, you should get white light – if you have a color cast, the gear is broken and you need to tell a technician.

Both types of enlargers have a white light setting – to help with focusing your negative.

Omega Super Chromega D – slide in lens

Beseler – clip in lens

Has a setting for high and low light intensity – to help with printing thin negatives, use the low setting. Otherwise, always use the high light setting.

Has a bellows control for printing different negative sizes.

## **COLOR II**

### **Printing Procedures for C-prints (chromogenic) using the RA-4 process**

Color paper must be kept in total darkness until it has been processed. Always keep your paper in its box to avoid fogging. Do not touch the emulsion side of the paper to avoid fingerprints – handle at the edges.

#### **Contact sheets:**

- Make contact sheets to help choose which negatives to print
- Negatives rest emulsion (dull) side down against the paper (emulsion side up)
- Flatten with a piece of glass (from the cage), and make a test strip
- The sheets do not have to be perfect – only useful

#### **Prints:**

- Remove dust from negative with canned air
- Put negative in carrier emulsion side down, place in enlarger
- Focus (use the back of an old print in the easel for a white background, have the aperture wide open, and use the white light for easiest focusing)
- Adjust easel blades and height of enlarger for the desired print size
- Use the middle range aperture for your lens – f8, f11, f16 – to get the sharpest focus across the entire image
- Start making test strips and prints with the filtration set to the levels suggested by your paper type (it's on the back of the box)
- Never use the Cyan filter (if all three (CMY) are used, it creates a situation called neutral density which blocks some colors and creates extra density)
- Never rip your test strips – they will jam the machine - always cut them with your own scissors
- I suggest you use an exposure device to make your test strips. It saves paper, and will help you to see color casts by placing different filtrations on the same piece of paper
- Adjust your aperture and time so that your exposure falls in between 8-20 seconds (this is to avoid reciprocity failure)
- Write down your filtration, f-stop and exposure time in a notebook
- After exposure, bring paper directly to the RA-4 processor
- Whistle or make a noise as you walk around in the darkroom to avoid walking into other students
- Insert the paper emulsion side up
- Announce the side and size – e.g. “8x10 in on the left”
- When your test strip is finished, write the filtration on it so you can compare later
- Evaluate your print in the viewing room and in variable light for density, contrast and color balance (use your Kodak filters to aid color evaluation)

#### **Color Balance:** Subtractive CMYK printing filtration adjustments

<b>Problem (color cast)</b>	<b>Correction (will appear)</b>	<b>Adjustment</b>
Magenta	Green	+ M
Red	Cyan	+ M and +Y
Yellow	Blue	+Y
Green	Magenta	- M
Blue	Yellow	- Y
Cyan	Red	- M and -Y