Color Theory: Test 3 Review

Final Exam Period Options
10am Class: _____ Tuesday @ 10.30am
1pm Class: _____ Tuesday @ 1:30pm

Topics selected primarily from chapters 6, 7, 8, (ch. 9 — know major hue schemes)
Be able to **chart color schemes** using color wheel, value staff, and by noting limits and dominants.
Be able to **specify a palette** of colors (H/V/C) based on a prescribed scheme. (scheme + dom's + sub's)
Understand Chevreul's basic law: "Two adjacent colours, when seen by the eye, will appear as dissimilar as possible". Be able to identify consequences of this law in juxtapositions of colors.

Topics

Hue, Value, Chroma
Dominance, Subordinance, Proportions

Ch. 6

C.I.E. Color Space (73-74), spectral sensitivity, just-noticeable difference, spectrophotometer, luminance, chromaticity, Chromaticity Diagram.
CIE System advantages (light-based; digital; repeatable.)
Why is no single color model complete? (74)

Chapter 7 — Subtractive Color (p. 75ff)

Conditions motivating color spec systems (91)
Dyes vs. Pigments vs. Lakes (75)
Original (oldest) sources of dyes (75) (e.g. indigo, cochineal, royal purple)
First use of synthetic dyes; diversity of synthetic dyes now available. (75)
Consistency, vibrance & permanence of dyes vs. pigments (75)
Earliest pigment sources (75), (e.g. earth(s), minerals, charcoal, etc.) Permanence and color range.
Progress in Renaissance (75-6) (chemical Rx)
Advent of manufactured/synthetic colorants (industrial age, c.1850)
Reliability of early synthetic pigments (as used by Van Gogh, Gauguin, Seurat, Fauves, etc.) (76)
Critical color matching (192); ideal lighting conditions (lect) light booths of varied bulbs.
Munsell Notation System (H V/C) notation (e.g. 5R 6/4 = "5R" – red hue; "6" – value; "4" – mid-low chroma) (76-77)
(be able to recognize a color by its Munsell spec. Questions won't be highly specific. You will need familiarity with the H V/C notation.)
Straight line mixing method (78-9)
complement-mixed neutrals (79),
mixed primaries (80), Glaze, Tint (80)
Ceramic Glazes: basic ingredients & factors effecting final color (82); role of test chips. (82)
Colored Glass: source of coloring, permanence (83). Chihuly's role in art glass.
Fiber Dyes: number of available fiber dyes. (84)
Sources of, & typical colors of, natural dyes
Lorraine Smith's optically mixed fibers (87)
Mordant
Color Printing – 4-color process (CMYK), (91ff) (including colors via transparent inks & overlap, screening/half-toning, separations, hues) (91)
Order of CMYK printing (92)
Benefits of 6- 8-color presses ()
Continuous Tone Art vs. Line Art (91)
Spot color/flat color (non-process colors/inks) (93)
Maximum ink coverage in 4-color process
Pantone Matching System (PMS) ("U" vs "C") (94)
Why 5 Pantone "fans" (color swatch books)? (94)
Pixel = ? (95)
Giclée Printing technology, benefits and uses (97)
RGB to CMYK conversion problems; Color Mapping, Color Management software.
Color Profiling, device gamut, clr conversion (99, 112)
Imaging Devices & Color gamuts (lect & web)
Factors affecting the reliability of printed color (97-99)
Disadvantage of proofing systems (99)
Metamerism (100)
Color fading—causes & protection against (101)Human sensitivity to color

Ch. 8

Light as a creative/expressive medium.
Color model in analog television. (103)
Chromaticity (103), Luminance in analog TV signal.
Basic additive color mixing: what combinations of RGB combinations that create R/O/Y/G/BV/B/RV, White & Black & Mid-Gray
Cause of limited color gamut in computer monitors and CMYK printing. (104)
C.I.E. chromaticity chart's range of color (104)
Device gamuts; C.I.E. representations of device color gamuts; white/neutral centers; wavelength-based angle or border position. (104)
HSB vs. CMYK vs. RGB ~~(vs. Hex vs. Lab)~~ (105/111)
Photoshop "out-of-gamut" warning. (105)
Pixels (106) Resolution ( )
Discrimination of human color vision (hues and colors) (108)
The goals of, and the need for Color management software, e.g.ColorSync. (99)
Gamma differences between Mac & PC (PC darker midtones). Gamma and value representation. (112)