

New York City College of Technology

Communication Design Department

The City University of New York

CDMG 2300 – Cross Media Color Analysis

Course Description

Fundamentals and theoretical aspects of color as used in commercial applications in communication media: offset and digital print, photography and web/mobile screen. Study of terms, measurements, gamuts, controls, industry standards, and calibration to ensure reliable and high quality results for all output media.

2 Credits, 3 Hours (1 lecture, 2 lab)

Prerequisites

CDMG 1111, Graphic Communications Workshop

COMD 1167, Type and Media, COMD 1162 Raster and Vector Graphics.

Course Objectives

INSTRUCTIONAL OBJECTIVES	INSTRUCTIONAL OUTCOMES	ASSESSMENT METHODS
Define and clarify terminology, concepts, and applications for proper color use in the commercial environment.	Students will navigate the cross-media color spectrum using the proper criteria.	The student will demonstrate mastery of terms through the presentation of projects and concepts through rubric-graded presentations and reports.
Identify and determine critical comparisons among various color gamuts relevant to their corresponding output (manufacturing) methodologies.	Use of appropriate and accurate specifications.	The student will present rubric-graded written and verbal projects across the four media: print, digital print, photography and screen.
Describe the underlying principles and concepts that are essential for managing color in all environments.	Demonstrate application of knowledge in print and screen based applications.	Students will assist one another through a team-driven project aimed at exposing the various color applications.

Reflect learning from resource material that students will interpret appropriately and accurately in their own words.	Presentation of original material.	Midterm and final projects demonstrating knowledge transfer in comparative media.
Students will present material based on applied research.	Citation and documentation of supporting material.	Midterm, quizzes and final projects will be reviewed for the accuracy and extent of research materials.

General Education Objectives

<p>Writing The student will demonstrate the ability to write clearly articulated thoughts in a professional, informed manner.</p>	Evaluate how well students absorbed and consequently applied their learning through graded written portions of projects.
<p>Academic and Professional Reading The student will demonstrate the ability to read pertinent information using industry-specific sources.</p>	Evaluate through class discussion and written tests if students absorbed information from industry-specific sources.
<p>Oral Communication Speaking: The student will demonstrate the ability to articulate themselves using relevant industry-specific language.</p>	Evaluate through class discussion and /or written tests if students use appropriate nomenclature to defend creative, critical and technical decisions in project concepts and development.
<p>Social Interaction The student will demonstrate the ability to work in teams, including people from a variety of backgrounds, and build consensus.</p>	Evaluate the collaboration and integration of the team with a rubric for creative and critical team performance and project outcomes.

Teaching/Learning Method

Students in this class are expected to explore, construct and demonstrate knowledge of the technology, terminology, skills, tools, policies and procedures to understand the applied color theory and management of color across various output media. This includes the fundamentals color, analysis for purity and accuracy of color, editing to correct color, color output devices, their technologies and processes.

Students are expected to work individually to document, analyze and apply learning about key color management topics and concepts. Each student is required to demonstrate an understanding of the topics from reading resource material and completing printed and screen assignments prior to the class sessions. Students are expected to articulate their thoughts during class sessions in the form of written reports, discussions, hands-on assignments and presentations.

A midterm and final project will cover subject matter and presentations covered in class.

The collaborative functions of Blackboard may be used to enhance the learning environment inside the classroom beyond the ambiance of a single projector and screen. Blackboard allows students to work on projects and develop focused critical thinking regarding the course material and assignments.

Required Texts

Contemporary Color: Theory and Use, 2nd Edition

By Steven Bleicher

ISBN13: 978-1-111-53891-0

The Color Index

By Jim Krause

ISBN-13: 9781440302626

The Interaction of Color

by Joseph Albers

ISBN-13: 978-0300115956

Recommended Texts

The Elements of Color:

A Treatise on the Color System of Johannes Itten Based on his book the Art of Color

ISBN-13: 978-0300115956

Color Correction Handbook: Professional Techniques for Video and Cinema

Alexis Van Hurkman

ISBN-13: 978-0321713117

Professional Photoshop, The Classic Guide to Color Correction, Fifth Edition

by Dan Margulis

ISBN-13: 978-0321440174

Albers, Joseph. *Interaction of Color*. Computer software. Vers. 1.03. Yale, 25 Feb. 2014. Web.

<<https://itunes.apple.com/us/app/interaction-color-by-josef/id664296461?mt=8>>.

Attendance (College) and Lateness (Department) Policies:

A class roster roll will be taken at the beginning of each class. Only two absences may be allowed. After two absences, a student may be withdrawn because of unsatisfactory attendance (code WU). Students

- Quizzes & In-class participation 15%
- Team Presentation 20%
- Midterm Project 30%
- Final Project 35%

Topics

WEEK	LECTURE TOPIC	LAB EXERCISE	HOMEWORK
1	<p>Course Overview</p> <p>Aesthetics of Color - Why color is important: Color to express ideas, tone and mood, a practical and historical perspective. Albers. Color and psychoanalysis. Mood and emotion. Color as a means of communications.</p>	All encompassing slide show highlighting topics touched on in the lecture.	Reading - color psychology. Blicher Chapter 3. Homework 1: Find and post/bring in contemporary commercial print advertising that utilizes color in a compelling way.
2	<p>Introduction to and History of Color Theory: Newton, Goethe, Bacon. Primary, secondary and tertiary colors; mixing colors in theory; interactive color, reflected and transmitted color; color balance, density, saturation and color</p>	Discuss effectiveness of student examples of homework 1. Historical and contemporary slide show exemplifying the	Reading - color perception and color theory. Blicher Chapters 1 & 2 Homework 2: Find and post/bring in contemporary commercial web and/or

	temperature in camera images.	power of color.	motion advertising that utilizes color in an interesting way.
3	<p>The Mathematical Interpretation of Color: How and why colors are assigned a numerical value; what the value interprets.</p>	Discuss effectiveness of student examples of homework 2.	<p>Reading – Digital color. Pixels, Describing color: Gamut. Blicher Chapter 6.</p> <p>Homework 3: Find the names (numbers) and the equivalents of seven primary colors used in each of the previous two homework assignments.</p>
4	<p>The Color Gamuts and Standards: Lab, RGB, CMYK: a full comparison of the three applied color gamuts and their applications in commercial color reproduction. What the standards are, why they are in place, which products (output) use which standard and why.</p>	<p>Determine how color gamuts dictate the standards for output devices.</p> <p>TEAM FORMATION and team project details assigned. In teams of three, each team is assigned a color. Each team must present a case study, historical examples and create original works involving that color.</p>	<p>Homework 4: Knowing your project’s final output, correctly set up a print and screen project in the correct color space in Photoshop. Determine how the output devices set the color gamuts according to their limitations.</p>
5	<p>Color Proofs - Hard Copy and Screen Proofs: How proofs are used to predict the color output, how to use them as reference to make adjustments.</p>	<p>Review homework 4. Calibrate your computer screen using the Color Munki.</p> <p>QUIZ – 10 question quiz based on readings. (Blicher Chapters 1, 2 and 6)</p> <p>Examples of real world hard copy and screen proofs evaluated.</p>	

6	<p>The Computer with Respect to Color Applications: Photoshop, the monitor, the channels, bit-depth. How to read the data visually through the histogram and numerically from the curve values.</p>	<p>Compile a list of the types of RGB screens, their applications and their specifications.</p>	<p>Utilizing images from your photo library, select one and compare the histograms of their three channels. Map values of the shadow, midterm and highlight for each channel.</p> <p>Bliecher Chapters 6 & 7</p>
7	<p>The Color Curve and other color management tools in Photoshop: How color is adjusted and modified.</p>	<p>In a supplied document, revise colors accuracy according to their RGB and CMYK output.</p>	<p>Continue working on the revisions to the document assigned in class.</p>
8	<p>MIDTERM</p>	<p>Midterm Evaluation</p> <ul style="list-style-type: none"> • Determine and switch gamuts of supplied images. • Answer questions about historical and mathematical aspects of color. • Color correct hard-copy proofs in various lighting conditions to suit the color preferences of the client or project • Adjust color temperature of image. 	
9	<p>Color and Printing - Offset and Digital Printing: Ink properties, process verses spot colors, PMS colors, toner colorants; the effects of dot size and dot shape, varnishes and finishes on color; paper properties' effects on ink color, Key color rotation, metallic vs. foil, liquid</p>	<p>How profiles adhere to standards; the different RGB and CMYK profiles; how to customize profiles.</p>	<p>Customize the profile for one an image from your library using the techniques learned in class.</p>

	foil, PMS, monotone, duotone, tritone.		
10	Color Correction (by numbers): Skin tone and stand color charts for screen proofing in all gamuts; color correcting by balancing neutral colors.	Color correct the given skin tone sample and pull an ink jet, laser and screen proof and compare.	Following the example in class, color correct the two given samples, making note of the curve values.
11	Color and Profiles: How color output can be more predictable through profiles. Spot, Metallic, Hexachrome, Duotone, etc.	TEAM PRESENTATIONS Edit colors in a supplied document as directed. Based on a printed proof, indicate trapping controls required in the digital file.	
12	Standards for Devices: Why colors look different on different output devices and applying standards to maximize consistency and predictability in output.		Reading assignment on color and printing. Bliecher Chapter 9.
13	Color for Film and Video: Color correction in context; color safety in broadcast. Types of screens, calibration specifics, beyond the computer, tablet, and mobile device.	QUIZ Real world commercial ad campaigns and film shown and discussed. Contemporary examples of color aesthetics in film and video.	Reading assignment – packet and/or article on contemporary color design in recent film or television series.
14	Color and the Screen - Desktop and Mobile: Hex colors, hexadecimal, web-safe colors, hex color generator for screen applications, hue, brightness, saturation, color and image properties for the screen, type and color on the screen.	Output a prepared file to a print, to EPS, to .PSD, .PNG and to interactive PDF. Compare their color renditions.	Finish Final Presentation.
15	Final Presentations	Final Presentations.	