

COMMUNICATION GRAPHICS OUTLINE

Arlington Independent School District

I. Overview

A. Goals/Objectives

The student shall be introduced to the role of articulate visual communications in a technological society by having the opportunity to:

- use the principles of composition and design in producing communication products;
- apply the principles of optics and light control;
- utilize appropriate photographic, graphic and electronic equipment to produce communication graphic products;
- produce graphic images using the production stages of design, image generation, preproduction, production and finishing;
- develop products using photographic materials and equipment;
- design and produce graphic arts materials;
- participate in activities that demonstrate the interrelationship of communication graphics to other types of communication;
- use the appropriate chemistry for graphic arts and continuous tone photography; and
- investigate space-based information services through satellite systems.

B. Policies and Procedures

The student shall be able to discuss the instructor's policies and procedures required to effectively function in the domain of Communication Graphics.

II. Business Applications

A. Personal and Business Management (E.E. 75.85.1, 75.85.5)

The student shall have the opportunity to:

- explain how management assists in reaching personal and family goals;
- explain the management process;
- describe the role of management in controlling stress;
- identify and understand personal checking accounts;
- identify and understand personal loan application processes;
- identify and understand different financial institutions;
- identify the role and functions of business management;
- understand the lines of authority; and
- identify effective supervisory techniques.

B. Entrepreneurship (E.E. 75.85.3)

The student shall have the opportunity to:

- identify opportunities for business ownership;
- understand the risk and profit motive factor;
- understand the elements and advantages of the free enterprise system; and
- explain the role of small business in the free enterprise system.

C. Impacts (E.E. 75.85.7)

The student shall have the opportunity to:

- predict how selected technological developments will impact future cultures and societies; and
- explore the impact technology has on the environment.

III. History (E.E. 75.85.7)

A. Inventors/Historical Figures

The student shall be given the opportunity to identify the following individuals and their importance to the development of Communication Graphics:

Photographic Process-

| | |
|-----------------------|------------------------|
| Joseph Niepce | Louis Daguerre |
| William H. Fox Talbot | Frederick Scott Archer |
| Sir John Herschel | George Eastman |
| Harold Edgerton | Edwin Land |
| Louis Lumiere | Richard Maddox |

Pictorialists/Naturalists-

| | |
|----------------------|---------------------|
| Henry Peach Robinson | Peter Henry Emerson |
|----------------------|---------------------|

Portraitists-

| | |
|------------------------|---------------|
| Richard Avedon | Mathew Brady |
| Julia Margaret Cameron | Nadar |
| Arnold Newman | August Sander |

Documentary/Photojournalists-

| | |
|------------------------|-----------------------|
| Eugene Atget | Margaret Bourke-White |
| Robert Capa | Henri Cartier-Bresson |
| David Duncan | Alfred Eisenstadt |
| Frederick Evans | Walker Evans |
| Robert Frank | Alexander Gardner |
| Jacques Henri-Lartigue | Lewis Hine |
| Dorothea Lange | Timothy O'Sullivan |
| Jacob Riis | W. Eugene Smith |
| Paul Strand | Weegee |

Movers and Shakers-

| | |
|-----------------------|-----------------|
| Ansel Adams | Diane Arbus |
| William Henry Jackson | Andre Kertesz |
| Man Ray | Edward Steichen |
| Alfred Stieglitz | Edward Weston |
| f/64 | Life magazine |

Contemporary-

| | |
|--------------------|----------------|
| Wynn Bullock | Ernst Haas |
| Mary Ellen Mark | Duane Michals |
| Laszlo Moholy-Nagy | Jerry Uelsmann |
| Garry Winogrand | |

B. Materials/Processes

The student shall be given the opportunity to identify the following materials and processes and their importance to the development of Communication Graphics:

| | |
|---------------|-------------------|
| Daguerreotype | Heliograph |
| Calotype | Wet-Plate Process |
| Ambrotype | Tintype |
| Cyanotype | Carte-de-visites |
| Stereo | Roll film |
| Kodachrome | Ektachrome |
| Polaroid | Holography |

C. Equipment

The student shall be given the opportunity to identify the following equipment and their importance to the development of Communication Graphics:

| | |
|----------------|--------------------|
| Camera Obscura | View Camera |
| Kodak #1 | Leica |
| Polaroid | detective cameras |
| still video | facsimile machines |
| process camera | |

The teacher should use this list only as a reference. Other individuals or processes could be added at the instructor's discretion.

IV. Exposure (E.E. 75.85.52, 75.85.53)

A. Apertures

The student shall be given the opportunity to:

- List the basic apertures found on every camera;
- Discuss the apertures as a controller of light and controller of depth-of-field;
- Demonstrate an understanding of the relationship between one aperture and the next; and
- Define: depth-of-field, f-stop, aperture, "speed."

B. Shutter Speeds

The student shall be given the opportunity to:

- List the basic shutter speeds found on every camera;
- Discuss the shutter as a controller of light and controller of motion;
- Demonstrate an understanding of the relationship between one shutter speed and the next; and
- Define: shutter speed/exposure time.

C. Equivalent Exposures

The student shall be given the opportunity to:

- Discuss the relationship between the shutter speeds and apertures as controllers of the amount of light which strikes the recording surface; and
- Successfully compute equivalent exposures.

D. Meters

The student shall be given the opportunity to:

- Discuss the similarities and differences between reflected and incident light meters;
- Discuss the principle of using 18% gray as the calibration for light meters;
- Demonstrate an ability to avoid incorrect light meter readings; and
- Define: spot meters, averaging meters, photo-electric cell, CDS cell, f/16 rule.

V. Anatomy of a Camera (E.E. 75.85.9, 75.85.53, 75.85.55)

The student shall be given the opportunity to:

- List and identify the eight basic parts of a camera;
- Identify and discuss the advantages and disadvantages of the four basic types of cameras;
- Identify and discuss the advantages and disadvantages of the different film formats;
- Identify and discuss the advantages and disadvantages of the two basic types of shutters;
- Identify and discuss the differences between "normal," wide angle" and "long" lenses;
- Demonstrate the proper care and maintenance of photographic equipment;
- Discuss the use of filters to manipulate the exposure and negative; and
- Define: focal length, perspective, angle of view, zoom, macro, telephoto, lens mount, polarizing filter, UV filter.

VI. Light Sensitive Materials (E.E. 75.85.53, 75.85.54, 75.85.55)

The student shall be given the opportunity to:

- Identify and discuss the similarities and differences between black and white, color negative and color reversal films;
- Demonstrate proper handling procedures for film and paper to avoid chemical contamination, light fog, transportation and storage problems and other environmental conditions; and
- Define: ASA/ISO, grain, film speed, panchromatic, infrared, orthochromatic, emulsion, resin coated, fiber base.

VII. Safety (E.E. 75.85.6)

The student shall be given the opportunity to:

- Demonstrate proper safety procedures when mixing or working with chemicals;
- Successfully complete a safety exam to the teacher's established criteria;
- Locate and utilize product safety information sheets; and
- Establish habits of personal cleanliness and conduct which are conducive to productive work in all areas of the Communication Graphics lab.

VIII. Equipment Care and Usage (E.E. 75.85.9)

The student shall be given the opportunity to:

- Accept responsibility for equipment that they are using; and
- Demonstrate proper care and maintenance of photographic equipment.

IX. Film Processing (E.E. 75.85.10, 75.85.51, 75.85.52, 75.85.53, 75.85.54, 75.85.55, 75.85.56, 75.85.58)

The student shall be given the opportunity to:

- Demonstrate an ability to process black and white film;
- Demonstrate an understanding of the relationship of time, temperature and agitation to the development of the image;
- Explain the effect of exposure and development on density and contrast;
- Experiment with the push/pull process to change the effective ISO of the film; and
- Define: density, contrast, agitation, dilution ratios, push process, replenishment, one-shot chemicals.

X. Printing (E.E. 75.85.10, 75.85.51, 75.85.52, 75.85.53, 75.85.54, 75.85.55, 75.85.56, 75.85.58)

The student shall be given the opportunity to:

- Demonstrate proper use of filters and chemical manipulation to control contrast;
- Demonstrate dodging and burning techniques to manipulate the photographic image;
- List and explain the chemicals used in the black and white printing process;
- Demonstrate proper handling procedures for photographic paper and chemicals;
- Be able to produce an effective exposure test strip to evaluate contrast and exposure times;
- Select grades/surface texture/tones of photographic paper to achieve desired results; and
- Demonstrate proper use of an enlarger and timer.

XI. Lighting (E.E. 75.85.52, 75.85.53)

The student shall have the opportunity to:

- Discuss the differences between harsh and soft light; high contrast and low contrast light; and direct, diffused and directional-diffused light;
- Demonstrate an understanding of the effect that intensity of light has on exposure;
- Demonstrate the effect that direction of light has on photographs of a subject;
- Discuss the Kelvin system of rating the color of light and the effect that it has on film;
- Demonstrate the effective use of artificial lighting with emphasis on electronic flash; and
- Explain the use of filters to correct for color balance for a specific film.

XII. Composition (E.E. 75.85.51)

The student shall have the opportunity to:

- Incorporate and effectively utilize the basic elements of design; and
- Define: rule-of-thirds, simplicity, framing, dot, line, shape, value, texture, color, space, balance, proportion, rhythm, harmony, dominance, movement, unity.

XIII. Finishing/Analysis/Feedback (E.E. 75.85.8, 75.85.54)

The student shall have the opportunity to:

- Demonstrate proper matting, mounting and/or framing techniques on their photographic images;

- Eliminate technical flaws present in the photographic image through spotting techniques;
- Utilize toning processes to manipulate the photographic image;
- Demonstrate an ability to critically evaluate their own work and the work of others on the basis of accepted standards; and
- Afforded the opportunity to display their work in juried and unjuried exhibitions.

XIV. Other Visual Processes (E.E. 75.85.9, 75.85.51, 75.85.52, 75.85.53, 75.85.54, 75.85.55, 75.85.56, 75.85.57, 75.85.58)

The student shall have the opportunity to:

- Work with one or more of the following processes:

| | |
|----------------------|--|
| Screenprinting | Cyanotypes |
| Neg/Pos Reproduction | Gum Bichromates |
| Van Dyke Process | Xerox/mimeograph |
| Laserprinting | Diazo products |
| Color Negative Film | Color Reversal Film |
| Color Printing | Video |
| Computer Imagery | Digitizing and Manipulation of Images |
| Computer + Video | Black and White Transparencies |
| High Contrast Film | |
| Infrared Film | |

XV. Careers (E.E. 75.85.2, 75.85.4)

The student shall have the opportunity to:

- Explore the opportunities for employment in the Communication Graphics market, both locally and nationally;
- Be exposed to various professionals and exhibits as related to visual communications;
- Participate in on-site exploration of enterprises related to the visual communication field; and
- Develop the concepts and skills associated with human relations and personality development and successful employment or postsecondary training.

XVI. Color

The student shall have the opportunity to:

- Discuss the differences between color and black and white films;
- Discuss the difference between color negative and color reversal films;
- Discuss the instant color process;
- Explain the proper handling procedures for color films; and
- Explain proper safety procedures for handling color chemicals.

XVII. Space Based Communications (E.E. 75.85.59)

The student shall have the opportunity to:

- investigate space-based information services.