

ADVANCED GRAPHIC ARTS

GRADE: 9-12
PREREQUISITE: Beginning Graphic Arts
LENGTH: One semester
CREDIT: 5 units/semester of Practical Arts, Fine Arts, or
elective

SYNOPSIS

This course continues the learning in graphic arts to develop employable skills for students. This is an advanced course and will stress the skills of art and copy preparation, electronic imaging, reproduction photography, image Assembly/platemaking, basic offset press, job application skills and all elements required to complete the course.

This course outline has been prepared in conjunction with the State of California Model Curriculum Standards, Program Framework, and Process Guide for Industrial and Technology Education In California.

The teacher of this course is directed to refer to the Framework for a more detailed explanation and analysis of the topics contained in this outline.

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PREREQUISITE: Beginning Graphic Arts

INSTRUCTIONAL MATERIALS:

Textbook and Workbook:

Graphic Communications - The Printed Image, Dr. Zeke Prust; Goodheart-Willcox, Inc.; South Holland, IL; 1989.

COURSE OBJECTIVES:

The student will be taught the skills and competencies of the course outline.

1. The student will be able to complete all assignments and procedures to demonstrate their proficiency with all related graphic design, composition, and production
2. To prepare the student for employment in the area of graphic arts

I. INTRODUCTION

- A. Define the role of graphics in the free enterprise system
- B. Identify printing markets and types of printing business
- C. List printing's ranking among other industries
- D. Identify the major printing processes
- E. List the advantages of each major process
- F. List the disadvantages of each major process
- G. Identify the products produced by each major process
- H. List in order the business flow of printing from initial need to final product
- I. List in order the technical production flow from idea to finished product
- J. Identify major occupations in the graphic arts
- K. List the major responsibilities for each occupation
- L. Identify basic salary/wage expectation ranges for local area

II. ART AND COPY PREPARATION

- A. Identify basic equipment and hand tools for paste-up
- B. Identify basic materials and supplies for paste-up
- C. Produce a simple paste-up using the correct procedures, equipment, tools and materials

III. ELECTRONIC IMAGING

- A. Choose type using correct size and format

- B. Identify fundamentals of type and its uses
- C. Identify the various kinds of items that can be designed and produced using desktop publishing
- D. Demonstrate a keyboard typing proficiency of 30 to 40 W.P.M.
- E. Organize a file management system for opening, copying, saving, and deleting files
- F. Demonstrate file management operation for opening, copying, saving, and deleting files
- G. Log-on/boot-up and print out a page layout program and demonstrate a functional knowledge of computer commands/codes/menus/palette for the software in use
- H. Set text with appropriate margins, formatting, gutters, leading headings, etc.
- I. Flow copy from word processing program to page layout program according to job specifications

IV. REPRODUCTION PHOTOGRAPHY

- A. Identify basic darkroom equipment and hand tools
- B. Identify basic materials and supplies for line photography
- C. Produce a good quality line negative using sensitivity guide/scale
- D. Identify basic diffusion transfer exposure and processing equipment
- E. Identify basic diffusion transfer materials for making line prints
- F. Produce good quality line print using diffusion transfer process
- G. Make a diffusion transfer print

V. IMAGE ASSEMBLY/PLATEMAKING

- A. Identify basic stripping equipment and hand tools
- B. Identify basic stripping materials and supplies
- C. Produce a single color flat with correct dimensions and cut outs
- D. Make necessary corrections to flat (i.e. opaque/scribing)
- E. Identify platemaking equipment and tools for offset metal plates
- F. Identify plate materials types and processing chemicals for making offset metal plates
- G. Produce a correctly exposed and processed metal plate for offset printing
- H. Identify direct image platemaking equipment
- I. Identify direct image plate and processing materials
- J. Produce a direct image plate for offset printing
- K. Identify pin registration systems

VI. BASIC OFFSET PRESS

- A. Identify basic offset duplicator parts and operations
- B. Identify basic safety and operation procedures for an offset duplicator for single color printing
- C. Perform basic setup for printing a single color job
- D. Produce a printed single color job using an offset duplicator

VII. BINDERY

- A. Identify operational and safety parts of a paper cutter
- B. Identify grain direction of paper
- C. Calculate basic paper cuts from stock sheet
- D. Draw a master cutting diagram for making cuts
- E. Make accurate paper cuts using a mechanized paper cutter
- F. Identify basic paper types, weights, grades and classifications used in the printing industry
- G. Identify padding equipment and hand tools
- H. Identify padding materials
- I. Produce correctly made pads of paper
- J. Identify stapling and stitching equipment and hand tools
- K. Identify stapling and stitching materials and supplies
- L. Produce side and saddle stitched/stapled products
- M. Identify punching/drilling equipment and hand tools
- N. Measure to drill 3 ring notebook pages
- O. Make holes for 3 ring notebook
- P. Identify folding equipment and hand tools
- Q. Identify basic folds for printed products
- R. Make a single fold using an automatic folding machine
- S. Identify collating equipment and hand tools
- T. Make sets of paper using collating equipment in proper sequence
- U. Hand collate sets in proper sequence
- V. Identify die cut products and the basic procedure for diecutting
- W. Identify hot foil stamped products, basic equipment materials and procedures for foil stamping

VIII. MEASUREMENT

- A. Measure linear dimensions for printing materials in inches and fractions of inches
- B. Measure type in points and picas
- C. Measure volume for mixing chemicals for darkroom and pressroom operations
- D. Measure copy for reduction and enlargement using various methods to determine percentage setting

IX. SAFETY AND FIRST AID

- A. Identify location(s) of fire safety equipment
- B. Describe proper use of fire safety equipment
- C. List safety rules involving flammable liquids
- D. List the steps to be taken in case of injury in the lab
- E. Identify location(s) of first aid kit(s) and eye wash station(s)
- F. MSDS - Read and comprehend Material Safety Data Sheets
- G. Identify protective safety equipment where needed (gloves, goggles, ear plugs)
- H. Follow proper safety procedures when operating equipment
- I. Follow approved shop dress code for safe operation including necessary personal safety equipment
- J. Pass general lab safety test
- K. Pass safety test in individual specialty area(s)
- L. Use approved methods to dispose of waste materials
- M. Read, comprehend and follow instructions on warning labels
- N. Demonstrate common sense when working with others
- O. Demonstrate a working knowledge of the safety color code.

X. BASIC MATH

- A. Solve addition of whole number problems - 2 and 3 digits
- B. Solve addition of fraction problems
- C. Solve addition of decimal problems - 2 and 3 digits
- D. Solve subtraction of whole number problems - 2 and 3 digits
- E. Solve subtraction of fraction problems
- F. Solve subtraction of decimal problems - 2 and 3 digits
- G. Solve multiplication of whole numbers - 2 and 3 digits
- H. Solve multiplication of fraction problems
- I. Solve multiplication of decimal problems - 2 and 3 digits
- J. Solve division of whole number problems - 2 and 3 digits
- K. Solve division of fraction problems
- L. Solve division of decimal problems - 2 and 3 digits
- M. Solve fraction to decimal conversion problems
- N. Solve decimal to fraction conversion problems
- O. Solve decimals to percent conversion problems
- P. Solve percent to decimals conversion problems
- Q. Solve basic ratio and proportion problems
- R. Solve basic linear measurement problems
- S. Solve basic type calculation problems
- T. Solve basic liquid measurement problems
- U. Solve basic paper cutting calculations

- V. Solve basic points and picas measurement problems
- W. Solve inches to picas conversion problems
- X. Solve picas to inches conversion problems
- Y. Solve inches to points conversion problems
- Z. Solve points to inches conversion problems, and solve cost calculating problems

XI. JOB APPLICATION SKILLS

- A. Demonstrate proper work ethic/habits
- B. List means of locating job openings
- C. Read and comprehend want ads
- D. Write a personal resume
- E. Write a cover letter for obtaining a printing job
- F. Read and comprehend an employment application form
- G. Complete a job employment application form
- H. Practice job interview skills
- I. Complete a telephone interview for a printing job
- J. Write a follow-up letter
- K. Make a follow-up telephone call
- L. Evaluate benefit package for employment
- M. Compare job opportunities

BOARD APPROVAL: June 6, 1994