GRAPHIC COMMUNICATIONS

Advanced Graphic Communications

This course is designed to provide students with theory and hands-on experiences relative to the printing industry. The skills of the printing industry will be built upon by giving more real world experiences in the areas of digital file preparation, image capture, digital file output, press operations, binding and finishing, measurement, and basic math.

STS

UT AH

Skilled & Technical Sciences

E D U C A T I O N

Advanced Graphic Communications

Levels: Grades 11-12
Units of Credit: Minimum 0.5
CIP Code: 10.0303
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Test #:   564
License: CTE/Secondary
Endorsement: Graphic Arts
Prerequisite: ???

COURSE DESCRIPTION

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CORE STANDARDS, OBJECTIVES, AND INDICATORS

Standard 1
Students will understand the role of graphic communications.

Objective 1: Define the role of printing as a means of graphic communications.
Objective 2: Identify the key developments in the history of printing.
Objective 3: Identify print markets and types of print business.
Objective 4: Identify and describe the major printing process.
Objective 5: Identify the products produced by each major printing process.
Objective 6: List the advantages and disadvantages of each major printing process.
Objective 7: List in order the technical production flow from idea to finished product.
Objective 8: Identify major occupations in the printing industry and their responsibilities.
Objective 9: Identify and describe basic printing equipment.
Objective 10: Read and interpret production information from a job ticket/jacket.

Standard 2
Students will understand and demonstrate safe practices.

Objective 1: List safety rules involving flammable liquids.
Objective 2: List the steps to be taken in case of injury in the lab.
Objective 3: Identify location(s) of first aid kit(s).
Objective 4: Identify location(s) of eye wash station(s).
Objective 5: Identify where protective safety equipment is needed.
Objective 6: Follow proper safety procedures when operating equipment.

Objective 7: Follow approved shop dress code for safe operation.
Objective 8: Pass general lab safety test.
Objective 9: Read, comprehend and follow instructions on warning labels and MSDS.
Objective 10: Demonstrate common sense when working with others.

Standard 3
Students will demonstrate basic mathematical concepts as it applies to graphic communications.

Objective 1: Solve addition, subtraction, multiplication, and division of whole number problems.
Objective 2: Solve addition, subtraction, multiplication, and division of fraction problems.
Objective 3: Solve addition, subtraction, multiplication, and division of decimal problems.
Objective 4: Solve fractional to decimal conversion problems.
Objective 5: Solve decimal to fractional conversion problems.
Objective 6: Solve decimals to percent conversion problems.
Objective 7: Solve basic linear measure problems.
Objective 8: Calculate basic paper cuts from stock sheet.
Objective 9: Solve points to inches conversion problems.
Objective 10: Solve for ratios.
Objective 11: Calculate the appropriate DPI for scanning various originals.
Objective 12: Solve cost calculating problems.

Standard 4
Students will understand and demonstrate measuring systems.

Objective 1: Measure linear dimensions for printing materials in inches & fraction of inches.
Objective 2: Measure linear dimensions in centimeters & millimeters.
Objective 3: Measure type in points.
Objective 4: Measure copy for reduction and enlargement.
Objective 5: Measure elements in a page layout program.

Standard 5
Students will demonstrate digital file preparation.

Objective 1: Identify type fundamentals & their uses.
Objective 2: Identify the fundamentals of the digital prepress workflow.
Objective 3: Identify the importance of image resolution.
Objective 4: Identify various digital information storage and their uses.
Objective 5: Identify various desktop publishing applications and their uses.
Objective 6: Design a page with appropriate margins, formatting, guides, trims and folds.
Objective 7: Import text into a page layout program.
Objective 8: Import an image into a page layout program.

Objective 9: Identify different file formats and their uses.
Objective 10: Identify the difference between continuous tone and line art images.
Objective 11: Identify and describe a halftone.
Objective 12: Define & identify bleeds.
Objective 13: Describe the difference between spot and process color.
Objective 14: Create a spot color in a page layout program.
Objective 15: Describe the difference between RGB and CMYK.
Objective 16: Create a multi-page layout in a page layout program.
Objective 17: Define the difference between raster and vector.
Objective 18: Create or edit a vector image in an image editing program.
Objective 19: Edit a raster image in an image editing program.
Objective 20: Demonstrate keyboard typing skills.

Standard 6
Students will understand and demonstrate how to capture and image.

Objective 1: Identify various originals and their scanner settings (ie. Line Art, CT, Printed, Text).
Objective 2: Understand the effect of DPI on file size.
Objective 3: Identify basic scanning hardware.
Objective 4: Identify basic digital camera hardware.
Objective 5: Capture an image using a scanner or digital camera.

Standard 7
Students will demonstrate digital file output processes.

Objective 1: Define trapping and its purpose.
Objective 2: Explain the purpose of a folding dummy.
Objective 3: Define imposition and signatures.
Objective 4: Identify computer-to-plate systems.
Objective 5: Identify image and non-image areas of an offset plate.
Objective 6: Produce a plate for offset printing.
Objective 7: Define registration marks and their uses.
Objective 8: Describe the purpose of a proof.
Objective 9: Output color separations from a page layout program.
Objective 10: Output a proper bleed from a page layout program.

Standard 8
Students will be able to safely operate an offset press.

Objective 1: Identify offset press parts and operations.
Objective 2: Identify the cylinders of an offset press.
Objective 3: Identify safety and operation procedures for printing on an offset press.
Objective 4: Define the principles of offset lithography.
Objective 5: Compare the differences between digital printing and offset printing.
Objective 6: Describe printing applications.

Objective 7: Describe the technologies and equipment used in digital printing.
Objective 8: Perform setup for printing a single color job.
Objective 9: Produce a single color job using an offset press.
Objective 10: Perform basic cleanup of an offset press.

Standard 9
Students will be able to safely finish and bind printed produces.

Objective 1: Identify operational & safety parts of a paper cutter.
Objective 2: Identify grain direction of paper.
Objective 3: Make accurate paper cuts using a mechanized paper cutter.
Objective 4: Identify basic paper types, and weights.
Objective 5: Identify padding equipment and materials.
Objective 6: Produce a pad of paper.
Objective 7: Identify stapling and stitching equipment.
Objective 8: Produce side and saddle stitched/stapled product.
Objective 9: Identify punching/drilling equipment and materials.
Objective 10: Produce a mechanical, or three ring bound product.
Objective 11: Identify folding equipment and basic folds.
Objective 12: Produce a single fold using folding equipment.
Objective 13: Identify different binding methods and applications. (ie perfect, case, sewn)
Objective 14: Identify various finishing methods & applications (ie. die-cutting, stamping, embossing).
Objective 15: Demonstrate basic paper jogging techniques.

Standard 10
Students will know how to complete a job application and demonstrate interpersonal skills

Objective 1: Identify personal interests and learning styles.
Objective 2: Complete a self-assessment.
Objective 3: Discover self-motivation techniques.
Objective 4: Determine individual time-management skills.
Objective 5: Define future occupations.
Objective 6: Develop awareness of cultural diversity.
Objective 7: Recognize benefits of doing community service.
Objective 8: Demonstrate effective communication with others
Objective 9: Demonstrate proper work ethics and habits.
Objective 10: Identify components of an employment portfolio.

PROFESSIONAL DEVELOPMENT

Objective 1: As a participating member of the SkillsUSA student organization, complete the SkillsUSA Level 3 Professional Development Program.
   a. Evaluate your career and training goals.
   b. Market your career choice.

c. Develop personal financial skills
d. Serve as a volunteer in the community.
e. Plan and develop a business.
f. Conduct a worker interview.
g. Develop a résumé and write a cover letter.
h. Demonstrate interviewing skills.
i. Understand the cost of customer service.
j. Identify and apply conflict resolution skills.
k. Demonstrate evaluation skills.
l. Examine workplace ethics: the role of values in making decisions.
m. Perform a skill demonstration.
n. Learn what is contained in Material Safety Data Sheets (MSDS).
o. Perform a self-evaluation of proficiency in program competencies.

Objective 2: Serve as an officer in the school's chapter of SkillsUSA

Objective 3: Participate in an authorized SkillsUSA drafting competition.

Objective 4: Display a professional attitude toward the instructor and peers.

* SkillsUSA PDP requirements - recommended

*Graphic Communications (The Printed Image) by Z.A. Prust
**Pocket Pal (the handy little book of graphic arts production) ( ) Number of
Questions Not Scored
564-Revised 01/04/2007