

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

X Transfer Course X A.A. Degree applicable course
(check all that apply)

COURSE NUMBER AND TITLE: GC 182 Digital Prepress and Press II

UNIT VALUE: 3.0 units

MINIMUM NUMBER OF SEMESTER HOURS: 96 hours

BASIC SKILLS REQUIREMENTS:

Appropriate language and computational skills

ENTRANCE REQUIREMENTS

PREREQUISITE: None

COREQUISITE: None

RECOMMENDED PREPARATION: None

SCOPE OF COURSE:

Set up and control of printing on small offset presses. Examines offset chemistry, kinds of offset plates, inks, and offset press problems. Theory and practical applications of conventional and digital prepress.

SPECIFIC COURSE OBJECTIVES:

Successful students will be able to:

1. demonstrate knowledge of prepress terminology
2. demonstrate knowledge of needed computer terminology
3. demonstrate knowledge of needed press terminology
4. apply principles of lithographic chemistry in fountain solution
5. anticipate problems in press make-ready
6. identify five basic systems of the press
7. perform and identify basic lubrication points
8. solve image control problems
9. explain color theory in ink mixing
10. demonstrate understanding of job related instructions
11. explain plate selection and processing

12. solve press production problems

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

- I. Safety Orientation
 - A. Equipment safety
 - B. Computer safety
 - C. Fire safety
 - D. Material safety data sheets
 - E. Material identification system/handling
 - F. Chemical handling
- II. Terminology
 - A.. Basic prepress terminology
 - B. Press terminology
 - C. Needed computer terminology
- III. Five Systems of an Offset Press
 - A. Feed systems
 - 1. direct entry
 - 2. register board
 - B. Delivery system
 - 1. types of delivery systems
 - 2. delivery systems fault finding
 - C. Dampening systems
 - 1. conventional system preparation and operation
 - 2. bareback system preparation and operation
 - 3. semi-integrated system preparation and operation
 - 4. full integrated system preparation and operation
 - 5. fountain solutions
 - 6. dampening chemistry
 - D. Cylinder systems
 - 1. Plate
 - 2. Blanket
 - 3. Impression
 - E. Inking systems
 - 1. identify components of inking system
 - 2. ink system preparation
 - 3. operation of the inking system
 - 4. maintaining the inking system
- IV. Press Make-Ready
 - A. Reading job specifications
 - B. Make-ready procedures/requirements
 - C. Feed/delivery
 - D. Image registration/sheet control
 - E. Print quality
 - F. Press sheet approval
 - G. Quality control devices
- V. Press Operation
 - A. Control of image position
 - B. Control of optical density
 - C. Control of color on press

- D. Correcting press problems
- E. Tint screens and halftone variables
- F. Ink and water balance
- VI. Image Carriers
 - A. Types of image carriers
 - B. Exposure control of image carriers
 - C. Register control systems/processing
 - D. Vacuum frames
 - E. Plate mounting/removal
 - F. Plate problems
 - G. Plate chemistry
 - H. Itek plates
- VII. Image Imposition
 - A. Multiple images (Gang)
 - B. Types of imposition
 1. sheet wise
 2. work and back
 3. work and turn
 4. work and tumble
- VIII. Paper
 - A. Paper types
 - B. Physical properties
 - C. Paper problems
 - D. Paper storage and conditioning
- IX. Blankets
 - A. Types of blankets
 - B. Applications
 - C. Blanket care
 - D. Blanket modifications
- X. Ink
 - A. Types of ink
 - B. Specifications of ink
 - C. Ink modifiers
 - D. Ink problems
 - E. Ink mixing
- XI. Press Maintenance
 - A. Lubrication
 - B. Mechanical drives
 - C. Pressure adjustments
 - D. Electrical systems
 - E. Maintenance programs
- XII. Wash-Up
 - A. Clean up devices
 - B. Roller types and care
 - C. Color change
- XIII. Color Work (Single Color Press)
 - A. Spot color
 1. loose registration
 2. hairline registration (trapping)
 - B. Mechanical color
 - C. Process color

REQUIRED READING:

Crummett, Mark. Graphic Art Press and Finishing Process. Pittsburgh, PA: Mid American, 1993.

SUGGESTED READING:

Quick Printing Magazine

Printing Impressions Magazine

International Paper. Pocket Pal. A Graphic Arts Production Handbook. 15th Edition. Memphis, TN: International Paper, 1992.

Mac Week Magazine

REQUIRED WRITING:

Fifteen pages of unit worksheets for seven units of reading (matching, fill-in, short answer, and paragraphs). One page on procedures for term project in mechanical color. Record keeping of written and mathematical specifications on job tickets, and maintaining a job log of completed production work (one page per job).

OUTSIDE ASSIGNMENTS:

Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.

Students are required to read text, study lecture/lab notes, research and complete required press assignments, and write assigned papers.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:

- lecture
- laboratory
- lecture-laboratory combination
- directed study

DISTANCE LEARNING:

This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.

Yes No

If yes, check all that apply:

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)

- _____ One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- _____ Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

GRADING POLICY AND STANDARDS (include methods of determining whether the stated objectives have been met by students):

- 30% Production Work
- 20% Proficiency Test
- 30% Term Project
- 20% Written Worksheets

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?

Yes No Number of times course may be taken for credit: 4

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable:

58161 (c)(2)(A)

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SIGNATURES ON FILE