| Student's Name/Initial: | / | Date: | Teacher's Initials: | Date: |
|---|---|---|---|---|

# Screen Printing
## Course Codes for Graphic Communications program: 5205, 6200, 6201, 6202, and 6203



**Directions:** Evaluate the student using the applicable rating scales below and check the appropriate box to indicate the degree of competency. The ratings 3, 2, 1, and N are not intended to represent the traditional school grading system of A, B, C, and D. The description associated with each of the ratings focuses on the level of student performance or cognition for each of the competencies listed below.

**PERFORMANCE RATING**

3 - Skilled--can perform task independently with no supervision
2 - Moderately skilled--can perform task completely with limited supervision
1 - Limitedly skilled--requires instruction and close supervision
N - No exposure--has no experience or knowledge of this task

**COGNITIVE RATING**

3 - Knowledgeable--can apply the concept to solve problems
2 - Moderately knowledgeable--understands the concept
1 - Limitedly knowledgeable--requires additional instruction
N - No exposure--has not received instruction in this area

### A. TECHNOLOGY

3 2 1 N

__ __ __ __1. Describe the screen printing process.
__ __ __ __2. List advantages of screen printing process versus offset lithography or digital printing:
  a. size of image,
  b. type of substrate,
  c. ink density (four color process vs. spot PMS colors),
  d. special inks, and
  e. cost of equipment.
__ __ __ __3. Describe the components of a screen printing press:
  a. frame,
  b. mesh, and
  c. Squeegee blade.
__ __ __ __4. Define direct-to-screen.
__ __ __ __5. Compare features and specifications of three different types of automated screen printing presses.
__ __ __ __6. Describe the workflow steps of screen printing process (single color/inline or rotary press):
  a. file creation,
  b. film output,
  c. screen creation,
  d. mounting screen on press,
  e. print production, and
  f. clean up.
__ __ __ __7. List common products produced by screen printing.
__ __ __ __8. Collect samples of projects printed by screen printing.
  a. T-shirt,
  b. signage, and
  c. glassware.
__ __ __ __9. Assess the purpose and quality of each sample collected.

### B. DESIGN AND PREPRESS

3 2 1 N

__ __ __ __10. Review features and capabilities of professional page layout software applications:
  a. Adobe Illustrator.
_ __ __ __11. Demonstrate use of computer menus, shortcut keys, and panels in illustration software.
__ __ __ __12. Describe different types of graphics used in screen printing:
  a. line art,
  b. continuous tone,
  c. raster, and
  d. vector.
__ __ __ __13. Define pixels per inch resolution (screen display).
__ __ __ __14. Define dots per inch.
__ __ __ __15. Define lines per inch resolution (printing press.
__ __ __ __16. Describe an encapsulated postscript (EPS) file.
__ __ __ __17. Explain the use of an EPS file.
__ __ __ __18. Demonstrate the proper setup of a document using an instructor specified page size.
__ __ __ __19. Describe the use of paths in an illustration software program.
__ __ __ __20. Define trapping.
__ __ __ __21. Define knockout.
__ __ __ __22. Define overprint.
__ __ __ __23. Discuss the use of layers in an illustration software program.

__ __ __ __24. Define registration.
__ __ __ __25. Describe a frame, stencil, and mesh.
__ __ __ __26. Demonstrate the proper setup of a document using instructor specified frame, stencil, mesh and ink.
__ __ __ __27. Demonstrate applying trapping in an illustration software program.
__ __ __ __28. Describe a job ticket/docket.
__ __ __ __29. Determine job specifications from a job ticket/docket.
__ __ __ __30. Produce instructor specified art with all design elements, registration targets, color identification, and screen position on press.
__ __ __ __31. Produce a final proof to match job ticket specifications.
__ __ __ __32. Produce a positive film for stencil exposure.
__ __ __ __33. Define direct to screen.
__ __ __ __34. Produce a file for direct-to-screen.

## C. FRAME AND MESH PREPARATION

3 2 1 N

__ __ __ __35. List different mesh counts and thread diameters and mesh type (calendared, steel, and fabric).
__ __ __ __36. Determine the appropriate choice of mesh count and thread diameter for an instructor specified substrate/image.
__ __ __ __37. List different frame types/construction.
__ __ __ __38. Choose an appropriate frame for an instructor specified job.
__ __ __ __39. Describe the process of attaching mesh onto a fixed and/or retensionable frame system.
__ __ __ __40. Demonstrate the proper attachment of mesh to frame (stretch and glue or roller frame).
__ __ __ __41. Determine how to properly tension mesh.
__ __ __ __42. Describe the use of a tension meter.
__ __ __ __43. Demonstrate proper use of a tension meter.
__ __ __ __44. Inspect the quality of a frame and mesh preparation.

## D. STENCIL AND SCREEN PREPARATION

3 2 1 N

__ __ __ __45. Specify the workflow steps used to make a screen.
__ __ __ __46. Describe emulsion used to make a screen (capillary, liquid and film).
__ __ __ __47. Explain the use of emulsion when making a screen.
__ __ __ __48. Choose appropriate type of emulsion for an instructor specified job.
__ __ __ __49. Describe requirements to prepare the screen for a stencil application.
__ __ __ __50. Demonstrate the proper application of emulsion to the screen.
__ __ __ __51. Demonstrate the proper drying requirements of the screen.
__ __ __ __52. Demonstrate the proper steps of exposing the screen while maintaining screen to screen registration.
__ __ __ __53. Demonstrate the proper steps of washing image area of a screen and allowing to dry.
__ __ __ __54. Specify the possible defects that will affect the quality of print.
__ __ __ __55. Evaluate a stencil for quality defects.
__ __ __ __56. Demonstrate the proper step of masking a stencil for production use.

## E. PRINT PRODUCTION

3 2 1 N

__ __ __ __57. List workflow steps used during printing.
__ __ __ __58. Demonstrate proper loading of screen onto press.
__ __ __ __59. Describe characteristics of Squeegees used:
    a. durometer,
    b. shape, and
    c. width.
__ __ __ __60. Demonstrate the proper choice of Squeegee for a specific job.
__ __ __ __61. List the types of ink used in screen printing.
__ __ __ __62. Make the proper choice of ink for a specific job.
__ __ __ __63. Demonstrate confirmation of correct ink specifications from a job ticket.
__ __ __ __64. Describe the alignment of screens for proper registration.
__ __ __ __65. Demonstrate the proper alignment of screens for a specific job.
__ __ __ __66. Define flood stroke.
__ __ __ __67. Define print stroke.
__ __ __ __68. Define off contact and peel.
__ __ __ __69. Demonstrate the proper setting of off contact to control image quality.
__ __ __ __70. Demonstrate the proper application of ink to screen.
__ __ __ __71. Demonstrate the proper loading and alignment of substrate on press.
__ __ __ __72. Demonstrate the proper adjustment of Squeegee pressure for an instructor specified job.
__ __ __ __73. Demonstrate the proper operation of press.
__ __ __ __74. Determine quality control procedures to ensure print quality.
__ __ __ __75. Determine corrective actions required to maintain quality.
__ __ __ __76. Describe drying systems:
    a. flash and
    b. conveyor.
__ __ __ __77. Evaluate an instructor specified finished product.
__ __ __ __78. Demonstrate organization or packaging of a finished product according to job ticket.
__ __ __ __79. Organize or package a finished product according to job specifications.

## F. CLEAN-UP PROCESS

3 2 1 N

__ __ __ __80. Describe a safety data sheet.
__ __ __ __81. Explain the use of a safety data sheet.
__ __ __ __82. Demonstrate proper procedures when handling cleaning chemicals.
__ __ __ __83. List workflow steps used during cleaning.
__ __ __ __84. Demonstrate the proper removal, cleaning and storing of Squeegee(s).
__ __ __ __85. Demonstrate the proper removal of remaining ink from screen.
__ __ __ __86. Demonstrate the proper cleansing of screen.

__ __ __ __87. Demonstrate the proper storage or disposal of ink as specified by local regulations.
__ __ __ __88. Demonstrate the proper removal of frame from a press.
__ __ __ __89. Demonstrate the proper preparation of screen for reuse or reclamation.
__ __ __ __90. Demonstrate the proper selection and use of appropriate chemistry and washout equipment to remove stencil.
__ __ __ __91. List possible defects in a screen.
__ __ __ __92. Describe strategies for reuse of screen.
__ __ __ __93. Demonstrate the proper chemical or mechanical adjustments to screen for reuse.
__ __ __ __94. Demonstrate the proper storage of screen.
__ __ __ __95. Demonstrate proper cleaning of additional auxiliary equipment.
__ __ __ __96. Assess the cleanup activities completed within shop.

## G. MATH AND MEASUREMENT

3 2 1 N

__ __ __ __97. Solve subtraction of fraction problems.

- *Calculate amount of ink remaining if 1.75 pounds are used from a 3 pound can.*

__ __ __ __98. Solve addition of fraction problems.

- *Calculate total length of three 11 x 17 sheets of paper.*