

Digital File Preparation and Output

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Unit 1: Introduction to Digital Prepress

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| 1. Terms and definitions | 16. Survey Internet or periodicals for current articles on DPP technology |
| 2. Digital prepress (DPP) definition | 17. Survey a digital prepress workstation and rate it for ergonomic suitability |
| 3. Basic elements of a DPP system | 18. Collect samples of simple and complex DPP documents |
| 4. Typical steps in the DPP process | |
| 5. Benefits of DPP | |
| 6. Typical DPP job classifications | |
| 7. Characteristics of a professional DPP operator | |
| 8. Factors to consider before purchasing a DPP system | |
| 9. Characteristics of a quality DPP work environment | |
| 10. Factors used to determine if a document is suitable for DPP | |
| 11. Simple DPP documents | |
| 12. Complex DPP documents | |
| 13. Sources of DPP information | |
| 14. Copyright law applying to DPP | |
| 15. Three elements in an official U.S. copyright notice | |

Unit 2: Digital Prepress Systems

1. Terms and definitions*
2. Major types of DPP hardware
3. Types of computer systems used in DPP
4. Common operating systems used in DPP
5. Types of monitors used in DPP systems
6. Types of input devices used in DPP systems with their uses*
7. Characteristics of types of storage devices used in DPP systems*
8. Types of output devices used in DPP systems*
9. Common features of low-end and high-end output devices used in DPP systems

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Unit 2: Digital Prepress Systems (continued)

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| 10. PostScript and its importance to printing* | 12. Examine computer operating manual(s) for basic operating procedures |
| 11. Networking overview* | 13. Complete a DPP system-specifications list |
| | 14. Determine system requirements for a specific software package* |
| | 15. Determine basic costs of DPP systems* |
| | 16. Start/Boot the computer |
| | 17. Burn a CD or DVD |
| | 18. Back up a CD or other removable media |

Unit 3: Software

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| 1. Terms and definitions | 16. Evaluate a page-layout software package* |
| 2. Types of software used in DPP systems* | 17. Examine page-layout software manual for basic operations* |
| 3. Factors to consider before purchasing DPP software* | 18. Create word-processed document* |
| 4. Characteristics of quality word-processing software* | 19. Practice using publication-window features* |
| 5. Characteristics of quality illustration software* | 20. Practice using page-specification features* |
| 6. Characteristics of quality image-editing software* | 21. Practice using paragraph- and type-specification features and flow text* |
| 7. Characteristics of quality preflight software | 22. Create, edit, and move a headline* |
| 8. Characteristics of quality page-layout software* | 23. Place a file and then edit and move sentences within file paragraphs* |
| 9. Basic page-layout software features* | 24. Copy/paste, cut/paste, and move a paragraph |
| 10. Basic page-layout software text-tool operations | 25. Create a letterhead* |
| 11. Page-setup features* | |
| 12. Paragraph-specification features* | |
| 13. Type-specification features* | |
| 14. Editing features | |
| 15. Problems encountered when using office software for print production | |

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Unit 4: Type Selection

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| 1. Terms and definitions* | 14. Measure type* |
| 2. Terms related to punctuation marks and symbols used in DPP* | 15. Identify fonts available on digital prepress workstation* |
| 3. Anatomy of a type character* | 16. Practice adjusting leading, kerning, and letterspacing* |
| 4. Basic type measurements* | 17. Select type using guidelines for readability and legibility |
| 5. Difference among the terms typeface, type family, typestyle, and font* | 18. Perform font management activities* |
| 6. Typeface classifications* | |
| 7. Type adjustments commonly required in DPP* | |
| 8. Factors affecting readability and legibility in typographic materials | |
| 9. Font characteristics | |
| 10. Types of font technologies* | |
| 11. Font issues to consider when sending DPP files to an output service provider | |
| 12. Characteristics of font management utility software* | |
| 13. Font transferability issues | |

Unit 5: Document Design

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| 1. Terms and definitions* | 10. Evaluate the design of a magazine ad* |
| 2. Factors to consider when applying principles of document design* | 11. Design a single-page flyer* |
| 3. Definitions of types of design elements | 12. Examine illustration software manual for basic operations |
| 4. Types of graphic treatments | 13. Interpret a job ticket* |
| 5. Types of text treatments* | 14. Rescale graphics |
| 6. Types of graphic enhancements | 15. Create a computer-generated grid |
| 7. Steps in the design process* | 16. Create a single-page flyer* |
| 8. Cost awareness factors to consider when planning a job | 17. Add contrast using special effects type and screen tints* |
| 9. Definition of a job ticket* | 18. Create a logo design* |
| | 19. Create stationery utilizing logo design* |
| | 20. Create a spot color brochure* |

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Unit 6: Scanning and Digital Image Capture

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| 1. Terms and definitions* | 19. Research copyright law in relation to scanned materials |
| 2. Types of scanners* | 20. Examine scanning hardware and software available in your classroom* |
| 3. Common features of flatbed scanners* | 21. Identify scanner and scan settings* |
| 4. Types of software used in scanning* | 22. Examine image-editing software manual for basic operations |
| 5. File formats for scanned images* | 23. Scan line art* |
| 6. PPI, DPI, and LPI* | 24. Scan a continuous tone image* |
| 7. Factors that determine scanning resolution | 25. Use image-editing software to touch up and prepare line art scan for print* |
| 8. Scanning resolutions and scanner settings* | 26. Use image-editing software to touch up and prepare continuous tone scan for print* |
| 9. When to scan images as grayscale, line art, and RGB* | 27. Calibrate and assess a desktop scanner |
| 10. Converting RGB scanned images to CMYK for print* | 28. Scan a continuous tone color original* |
| 11. Moiré patterns and how to avoid them* | 29. Convert a continuous tone color scan to grayscale* |
| 12. Scanning guidelines | 30. Perform basic color correction* |
| 13. Use of digital photography in digital prepress* | 31. Use image-editing software to perform basic image cloning* |
| 14. Types of digital cameras* | 32. Calibrate a color monitor* |
| 15. Resolution of digital cameras* | 33. Place scanned graphics/photos in page-layout document* |
| 16. Common features of image-editing software | 34. Scan text using OCR software* |
| 17. Additive and subtractive primary colors | 35. Capture an image with a digital camera and download to the computer* |
| 18. Functions of printing inks | |

Unit 7: Digital File Preparation

1. Terms and definitions
2. Typical steps in a DPP layout process
3. Methods of editing text
4. Methods of editing graphics
5. Stacking text and graphics
6. Document-size commands with their effect on printer production

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Unit 7: Digital File Preparation (continued)

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| 7. Standard proofreaders' marks* | 17. Proofread a document* |
| 8. Steps in proofreading documents | 18. Determine specifications for a newsletter* |
| 9. Elements of a newsletter | 19. Determine specifications for a multi-page document |
| 10. Elements of a multi-page document | 20. Research solutions to digital file preparation problems* |
| 11. PDF for press quality prints* | 21. Stack graphics and text |
| 12. File compression* | 22. Convert bitmap art to vector art* |
| 13. Methods of submitting digital print jobs* | 23. Edit clip art* |
| 14. Backup utilities and their importance* | 24. Produce a newsletter* |
| 15. Digital asset management (DAM) software* | 25. Produce a multi-page document* |
| 16. Macintosh-to-Windows and Windows-to-Macintosh file conversion* | 26. Produce customer-specified document* |
| | 27. Create a PDF for output to a digital device* |
| | 28. Use a file compression utility for file transfer or storage* |
| | 29. Transfer files using FTP and e-mail* |
| | 30. Back up files* |

Unit 8: Digital File Output

1. Terms and definitions*
2. Color management*
3. Color and printing terminology*
4. Quality control devices for color management*
5. Dot gain*
6. Computer integrated manufacturing (CIM)*
7. Preflighting files*
8. Preflight checklist*
9. File repair*
10. Terminology related to troubleshooting digital file problems*
11. Color trapping and related terms*
12. Advantages and disadvantages of trapping in page-layout software versus trapping in dedicated trapping software*
13. When to trap*
14. Creating a folding dummy for a perfect bound book and a saddle stitch book*

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Unit 8: Digital File Output (continued)

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| 15. Types of imposition* | 30. Research color management* |
| 16. Parts of a typical layout for digital imposition | 31. Describe the purposes of SWOP and GRACoL* |
| 17. Proofing systems* | 32. Research proofing systems* |
| 18. What to check for in a proof* | 33. Observe computer-to-plate operations at a commercial printer* |
| 19. Advantages and disadvantages of soft proofing and hard proofing* | 34. Set GCR in Adobe Photoshop* |
| 20. Purposes of a RIP* | 35. Perform color management* |
| 21. Functions of a RIP* | 36. Preflight a file* |
| 22. Media and their screen frequency (LPI) settings | 37. Correct an unneeded knockout |
| 23. Computer-to-plate systems* | 38. Create a vector drawing with trapping* |
| 24. Components of a CTP system* | 39. Create a folding dummy* |
| 25. Types of CTP systems* | 40. Use imposition or page-layout software to impose a document* |
| 26. Lasers used in CTP system imaging devices* | 41. Create single color layout using work-and-turn and work-and-tumble |
| 27. Plate types* | 42. Create a digital proof* |
| 28. Plate scanning and ink key presetting technologies* | 43. Preflight a PDF* |
| 29. Purposes of a plate punch system | |

Unit 9: Digital-Based Printing

1. Terms and definitions*
2. Digital printing definition*
3. Digital printing processes*
4. Variable data printing*
5. Types of jobs produced by digital printing and copying*
6. Typical steps in the digital workflow process*
7. Functions of the RIP in digital-based printing
8. Advantages and disadvantages of file formats commonly used in digital-based printing*
9. Advantages and disadvantages of digital printing versus offset printing*

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Unit 9: Digital-Based Printing (continued)

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| 10. Digital printing inks and toners | 18. Research digital imaging* |
| 11. Components of a digital press* | 19. Research file extensions and their uses* |
| 12. Qualities of substrates used in digital printing* | 20. Demonstrate proper paper handling on a digital press* |
| 13. Grain direction* | 21. Send a job to the RIP* |
| 14. Proper paper handling* | 22. Release a job from the RIP* |
| 15. In-line, near-line, and off-line bindery and finishing solutions* | 23. Execute a print job on a digital press* |
| 16. Safety considerations for digital printing* | 24. Output and perfect bind a book* |
| 17. Environmental considerations* | 25. Output a document utilizing variable data* |
| | 26. Print two-sided (head-to-head) black digital image* |
| | 27. Print black digital image on coated paper* |
| | 28. Print and staple a one-sided, multi-page black digital image |
| | 29. Print a two-sided color digital image |
| | 30. Print, fold, and saddle stitch an eight-page color digital image* |
| | 31. Perform preventive maintenance on a digital press* |

Unit 10: Wide-Format Printing

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| 1. Terms and definitions | 10. Examine wide-format printers and software available in your classroom |
| 2. Types of wide-format printers* | 11. Examine ink and media available in your classroom for wide-format printing |
| 3. Inkjet components of piezoelectric/continuous flow wide-format printers* | 12. Select appropriate media and ink for wide-format printing jobs |
| 4. Common wide-format printer communication connections | 13. Construct a calendar* |
| 5. Resolutions commonly used in wide-format printing | 14. Set up a multiple up poster imposition* |
| 6. Jobs commonly printed on wide-format printers | 15. Load paper onto a wide-format printer |
| 7. Types of inks, topcoats, and laminates used in wide-format printing* | 16. Check media and ink setup for a wide-format printer and align media path |
| 8. Types of media commonly used in wide-format printing* | |
| 9. Terminology related to media used in wide-format printing | |