

Digital File Preparation and Output

PrintED Crosswalk

PrintED is a national accreditation and certification program for graphic communications courses of study at the secondary and post-secondary levels. Applicant and accredited programs are provided with a list of competencies, developed by educators and industry, for each area of accreditation. The competencies related to PrintED's Digital File Preparation, Advanced Digital File Preparation, Digital File Output, and Digital Production Printing competency lists are taught in this publication. The first column identifies the PrintED competency by number. The second column identifies where the PrintED competency is taught by noting the exact unit number and objective, assignment sheet, or job sheet.

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PrintED Digital File Preparation	MAVCC Tasks
A. Orientation	
1.	Unit 5: Objective 9—Definition of a job ticket; A.S. 4— Interpret a job ticket
2.	Unit 5: Objective 2—Principles of document design and factors to consider when applying them; S.S. 1— Effective use of proportion; S.S. 2— Effective use of direction; S.S. 3— Effective use of contrast; Student Supplement 4— Effective use of rules; Student Supplement 6— Using type and screen tints as design techniques to create contrast; A.S. 1— Evaluate the design of a magazine ad
3. 4.	Unit 6, Objective 9—When to scan images as grayscale, line art, and RGB
5.	Unit 6, Objective 10—Converting RGB scanned images to CMYK for print; Unit 8, Objective 3—Color and printing terminology
6.	Unit 2, Objective 10—Discuss PostScript and its importance to printing; Unit 8, Objective 1— Terms and definitions
7.	Unit 3, Objective 2—Types of software used in DPP systems and their uses; Objective 4— Characteristics of quality word-processing software; Objective 5—Characteristics of quality illustration software; Objective 6— Characteristics of quality image-editing software
8.	Unit 5, J.S. 3—Create a single-page flyer; Unit 7, J.S. 5—Produce a multi-page document

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9.	Unit 2: A.S. 3—Determine system requirements for a specific software package; A.S. 4—Determine basic costs of DPP systems; Unit 3: Objective 3—Factors to consider before purchasing DPP software; Unit 3, A.S. 1—Evaluate a page-layout software package
10.	Unit 3: A.S. 2—Examine page-layout software manual for basic operations; J.S. 1—Create word-processed document
11.	Unit 5: Objective 7—Steps in the design process; A.S. 1—Evaluate the design of a magazine ad; A.S. 2—Design a single-page flyer; Unit 10, J.S. 1—Construct a calendar
12.	Unit 2, Objective 1—Terms and definitions
13.	Unit 7, Objective 13—Methods of submitting digital print jobs; J.S. 9—Transfer files using FTP and e-mail
14.	Unit 8, Objective 7—Preflighting files
15.	Unit 8, Objective 8—Preflight checklist; J.S. 3—Preflight a file
16.	Unit 8, Objective 8—Preflight checklist; J.S. 10—Preflight a PDF
17.	Unit 8, Objective 23—Computer-to-plate (CTP) systems
B. Type	
1.	Unit 4, A.S. 1—Measure type
2.	Unit 4, Objective 3—Anatomy of a type character
3.	Unit 4: Objective 1—Terms and definitions; Objective 2—Terms related to punctuation marks and symbols used in DPP
4.	Unit 4, Objective 2—Terms related to punctuation marks and symbols used in DPP
5.	Unit 4, Objective 1—Terms and definitions; Unit 5, Objective 1—Terms and definitions
6.	Unit 4, Objective 5—Definitions of the terms typeface, type family, typestyles, and font
7.	Unit 4: Objective 6—Typeface classifications; A.S. 2—Identify fonts available on digital prepress workstation
8. 9. 10.	Unit 4: Objective 4—Basic type measurements; Objective 7—Type adjustments commonly required in DPP; A.S. 1—Measure type; J.S. 1—Practice adjusting leading, kerning, & letterspacing

11.	Unit 3, Student Supplement 1—Examples of page-layout specification features; Unit 5, Objective 5—Types of text treatments
12.	Unit 4, Objective 10—Types of font technologies
13.	Unit 4, Objective 12—Characteristics of font management utility software; J.S. 3—Perform font management activities
C. Page Layout	
1.	Unit 3: Objective 8—Characteristics of quality page-layout software; A.S. 1—Evaluate a page-layout software package
2.	Unit 3, J.S. 3—Practice using page-specification features
3.	Unit 3: Objective 9—Basic page-layout software features; Objective 11—Page-setup features; Objective 12—Paragraph-specifications features; Objective 13—Type-specification features; A.S. 2—Examine page-layout software manual for basic operations; J.S. 2—Practice using publication-window features; J.S. 3—Practice using page-specification features; J.S. 4—Practice using paragraph- and type-specification features and flow text
4.	Unit 3: Objective 12—Paragraph-specifications features; S.S. 1—Examples of page-layout specification features; J.S. 4—Practice using paragraph- and type-specification features and flow text; Unit 5—J.S. 3—Create a single-page flyer
5.	Unit 7: Objective 7—Standard proofreaders' marks; A.S. 1—Proofread a document
6.	Unit 7, J.S. 5—Produce a multi-page document
7.	Unit 3: J.S. 3—Practice using page-specification features; J.S. 8—Create a letterhead; Unit 5: J.S. 3—Create a single-page flyer; J.S. 6—Create stationery utilizing logo design; Unit 7: J.S. 4—Produce a newsletter; J.S. 5—Produce a multi-page document; J.S. 6—Produce customer-specified document

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8.	Unit 3: J.S. 4—Practice using paragraph- and type-specification features and flow text; J.S. 6—Place a file and then edit and move sentences within file paragraphs; Unit 7: J.S. 4—Produce a newsletter; J.S. 5—Produce a multi-page document
9.	Unit 3: J.S. 3—Practice using page-specification features; J.S. 4—Practice using paragraph- and type-specification features and flow text; J.S. 5—Create, edit, and move a headline; J.S. 8—Create a letterhead; Unit 5: J.S. 3—Create a single-page flyer; J.S. 6—Create stationery utilizing logo design; J.S. 7—Create a spot-color brochure; Unit 7, J.S. 4—Produce a newsletter; J.S. 5—Produce a multi-page document; J.S. 6—Produce customer-specified document; Unit 10, J.S. 1—Construct a calendar
10.	Unit 5, J.S. 3—Create a single-page flyer; Unit 7: J.S. 4—Produce a newsletter; J.S. 5—Produce a multi-page document; J.S. 6—Produce customer-specified document
11.	Unit 5: J.S. 3—Create a single-page flyer; J.S. 6—Create stationery utilizing logo design; J.S. 7—Create a spot-color brochure; Unit 6, J.S. 11—Place scanned/graphics photos in page-layout document; Unit 7: J.S. 4—Produce a newsletter; J.S. 5—Produce a multi-page document; Unit 10, J.S. 1—Construct a calendar
12.	Unit 5, J.S. 6—Create stationery utilizing logo design
13.	Unit 5, J.S. 7—Create a spot color brochure
14. 15.	Unit 7: A.S. 2—Determine specifications for a newsletter; J.S. 4—Produce a newsletter (one page)
16.	Unit 5, J.S. 4—Add contrast using special effects type and screen tints
17.	Unit 5, J.S. 3—Create a single-page flyer
18.	Unit 3, A.S. 1—Evaluate a page-layout software package
19.	Unit 8, J.S. 9—Create a digital proof; Unit 10, J.S. 1—Construct a calendar
20.	Unit 7, J.S. 7—Create a PDF for output to a digital device

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21.	Unit 8, Objective 19—Advantages and disadvantages of soft proofing and hard proofing
D. Image Capture	
1.	Unit 6: Objective 1—Terms and definitions; Objective 9—Scanning grayscale, line art, and RGB
2.	Unit 6: Objective 2—Types of scanners; Objective 3—Common features of flatbed scanners; A.S. 2—Examine scanning hardware and software available in your classroom
3.	Unit 6, Objective 4—Software used in scanning; A.S. 2—Examine scanning hardware and software available in your classroom
4.	Unit 6: J.S. 1—Scan line art; J.S. 2—Scan a continuous tone image; J.S. 6—Scan a continuous tone color original; J.S. 13—Capture an image with a digital camera and download to the computer
5.	Unit 6, J.S. 1—Scan line art
6.	Unit 6: Objective 5, File formats for scanned images; J.S. 2—Scan a continuous tone image; J.S. 6—Scan a continuous tone color original
7.	Unit 8: Objective 3—Color and printing terminology; A.S. 1—Research color management
8.	Unit 8, J.S. 2—Perform color management
9.	Unit 6: J.S. 1—Scan line art; J.S. 2—Scan a continuous tone image; J.S. 3—Use image-editing software to touch up and prepare line art scan for print; J.S. 6—Scan a continuous tone color original
10. 11.	Unit 6, Objective 8—Scanning resolutions and scanner settings; A.S. 3—Identify scanner and scan settings
12.	Unit 6, J.S. 11—Place scanned graphics/photos in page-layout document
13.	Unit 6: Objective 13—Use of digital photography in digital prepress; Objective 14—Types of digital cameras; Objective 15—Resolution of digital cameras

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14. 15.	Unit 6, J.S. 13—Capture an image with a digital camera and download to the computer
16.	Unit 8, J.S. 2—Perform color management
E. Illustration	
1.	Unit 5, A.S. 3—Examine illustration software manual for basic operations
2.	Unit 5, J.S. 5—Create a logo design
3.	Unit 5, J.S. 7—Create a spot-color brochure; Unit 8, J.S. 5—Create a vector drawing with trapping
4.	Unit 5, J.S. 4—Add contrast using special effects type and screen tints
5.	Unit 5, J.S. 7—Create a spot-color brochure
6.	Unit 7, J.S. 3—Edit clip art
F. PDF	
1. 2. 3. 4. 5.	Unit 6, Objective 5—File formats for scanned images; Unit 7, Objective 11—PDF for press quality print
6.	Unit 7, J.S.7—Create a PDF for output to a digital device
7. 8.	Unit 7, Objective 11—PDF for press quality print
PrintED Advanced Digital File Preparation	
MAVCC Tasks	
1.	Unit 5: Objective 9—Definition of a job ticket; A.S. 4—Interpret a job ticket
2.	Unit 2, Objective 6—Types of input devices used in DPP systems; Unit 6, Objective 13—Use of digital photography in digital prepress
3.	Unit 2, Objective 8—Types of output devices used in DPP systems
4.	Unit 2, Objective 8—Types of output devices used in DPP systems; Unit 8, Objective 1—Terms and definitions
5.	Unit 9, Objective 3—Digital printing processes
6.	Unit 8, Objective 17—Proofing systems; Objective 19—Advantages and disadvantages of soft proofing and hard proofing
7.	Unit 2, Objective 11—Networking overview
8.	Unit 8: Objective 25—Types of CTP systems; J.S. 7—Use imposition or page-layout software to impose a document

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9.	Unit 2, Objective 10—PostScript and its importance to printing
10.	Unit 2, Objective 7—Types of storage devices used in DPP systems
11.	Unit 2: Objective 7—Types of storage devices used in DPP systems; Objective 11—Networking overview
12.	Unit 6, Objective 5—File formats for scanned images; Unit 7, Objective 11—PDF for press quality prints; Unit 9: Objective 8, Advantages and disadvantages of file formats commonly used in digital-based printing; A.S. 2—Research file extensions and their uses
13.	Unit 7, Objective 16—Macintosh-to-Windows and Windows-to-Macintosh file conversion
14.	Unit 7: Objective 12—File compression; J.S. 8—Use a file compression utility for file transfer or storage
15.	Unit 4, Objective 10—Types of font technologies
16.	Unit 5, J.S. 5—Create a logo design; J.S. 7—Create a spot-color brochure
17.	Unit 5, J.S. 4—Add contrast using special effects type and screen tints
18.	Unit 8, J.S. 7—Use imposition or page-layout software to impose a document
19.	Unit 8, J.S. 5—Create a vector drawing with trapping
20.	Unit 5: A.S. 2—Design a single-page flyer; J.S. 3—Create a single-page flyer
21.	Unit 7, J.S. 6—Produce customer-specified document
22.	
23. 24.	Unit 7, J.S. 7—Create a PDF for output to a digital device
25.	Unit 6, J.S. 12—Scan text using OCR software
26.	Unit 5, J.S. 7—Create a spot-color brochure
27.	Unit 6, J.S. 2—Scan a continuous tone image
28.	Unit 6, J.S. 6—Scan a continuous tone color original; J.S. 7—Convert a continuous tone color scan to grayscale
29.	Unit 6, J.S. 8—Perform basic color correction
30.	Unit 6, J.S. 9—Use image-editing software to perform basic image cloning

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31.	Unit 4, J.S. 3—Perform font management activities
32.	Unit 7, Objective 15—Digital asset management (DAM) software
33. 34.	Unit 7, Objective 14—Backup utilities and their importance; J.S. 10—Back up files
35.	Unit 2, S.S. 2—Common Macintosh system troubleshooting procedures; Unit 7: S.S. 3—PostScript errors; A.S. 4—Research solutions to digital file preparation problems; Unit 8, Objective 10—Terminology related to troubleshooting digital file problems
36.	Unit 6, J.S. 10—Calibrate a color monitor
37. 38. 39.	Unit 8: T.S. 1—Imagesetter & film processor quality control checks; Opt. J.S.—Perform quality control checks on film processor and imagesetter
40. 41. 42.	Unit 6: J.S. 4—Use image-editing software to touch up and prepare continuous tone scan for print; J.S. 8—Perform basic color correction
43.	Unit 6: Objective 8—Scanning resolutions and scanner settings; A.S. 3—Identify scanner and scan settings
44.	Unit 7, J.S. 2—Convert bitmap art to vector art
45.	Unit 8: Objective 3—Color and printing terminology; Objective 4—Purposes and applications of quality control devices for color management
46.	Unit 6: Objective 6—PPI, DPI, and LPI; A.S. 3—Identify scanner and scan settings
47.	Unit 6, Objective 11—Moiré patterns and how to avoid them
48.	Unit 8, A.S. 2—Describe the purposes of SWOP and GRACoL
49.	Unit 6: Objective 10—Converting RGB scanned images to CMYK for print; J.S. 6—Scan a continuous tone color original
50. 51.	Unit 8: Objective 2—Color management; J.S. 1—Set GCR in Adobe Photoshop
52.	Unit 8: Objective 2—Color management; A.S. 1—Research color management; J.S. 2—Perform color management
53.	Unit 8: Objective 3—Color and printing terms; A.S. 1—Research color management
54.	Unit 8, J.S. 2—Perform color management

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55.	<i>Press Operations: Binding and Finishing</i> , Unit 3, “Platemaking Procedures,” J.S. 6—Prepare a digital plate
56.	Unit 8: Objective 7—Preflighting files; Objective 8—Preflight checklist; Objective 9—File repair; J.S. 3—Preflight a file; J.S.10—Preflight a PDF
57.	Unit 6: Objective 8—Scanning resolutions and scanner settings; A.S. 3—Identify scanner and scan settings
58.	Unit 8, Objective 6—Computer integrated manufacturing (CIM)
59.	Unit 6, Objective 8—Scanning resolutions and scanner settings; Unit 8, Objective 5—Dot gain
PrintED Digital File Output	MAVCC Tasks
1.	Unit 5: Objective 9—Definition of a job ticket; A.S. 4—Interpret a job ticket
2.	Unit 8, A.S. 4—Observe computer-to-plate operations at a commercial printer; Unit 9, Objective 16—Safety considerations for digital printing
3.	<i>Orientation to Graphic Communications</i> , Unit 3, “Shop Safety,” Objective 7—Purposes of a material safety data sheet (MSDS); S.S. 1—Guidelines for interpreting material safety data sheets; A.S. 3—Interpret a material safety data sheet
4.	Unit 8, A.S. 4—Observe computer-to-plate operations at a commercial printer; <i>Orientation to Graphic Communications</i> , Unit 3, “Shop Safety,” Objective 20—Approved methods of disposing of graphic communications waste materials
5.	Unit 8: Objective 7—Preflighting files; Objective 8—Preflight checklist; Objective 9—File repair; J.S. 3—Preflight a file; J.S.10—Preflight a PDF
6.	Unit 8: Objective 8—Preflight checklist; Objective 9—File repair
7.	Unit 8, J.S. 3—Preflight a file
8.	Unit 8, Objective 11—Color trapping and related terms

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9.	Unit 8: Objective 12—Advantages and disadvantages of trapping in page-layout software versus trapping in dedicated trapping software; Objective 13—When to trap
10.	Unit 8, J.S. 5—Create a vector drawing with trapping
11.	Unit 8, Objective 15—Types of imposition
12.	Unit 8, J.S. 7—Use imposition or page-layout software to impose a document; Unit 10, J.S. 2—Set up a multiple up poster imposition
13.	Unit 8: Objective 14—Creating a folding dummy; J.S. 6—Create a folding dummy
14.	Unit 8, Objective 24—Components of a CTP system
15.	Unit 6, Objective 4—Types of software used in scanning; Unit 8, Objective 2—Color management
16.	Unit 9, J.S. 4—Execute a print job on a digital press
17.	Unit 8: T.S. 1—Imagesetter & film processor quality control checks; Opt. J.S.—Perform quality control checks on film processor and imagesetter
18. 19. 20. 21.	Unit 8: Objective 25—Types of CTP systems; Objective 27—Plate types and characteristics' A.S. 4—Observe computer-to-plate operations at a commercial printer
22.	<i>Press Operations, Binding and Finishing</i> , Unit 3, “Platemaking Procedures,” J.S. 5—Make additions, deletions, and repairs to an offset plate
23.	Unit 8, Objective 19—Advantages & disadvantages of soft proofing & hard proofing
24.	Unit 8: Objective 17—Proofing systems; A.S. 3—Research proofing systems
25.	Unit 10: Objective 2—Types of wide-format printers; Objective 3—Inkjet components of piezoelectric/continuous flow wide-format printers
26.	Unit 8, J.S. 9—Create a digital proof
27.	Unit 8, Objective 18—What to check for in a proof
28.	Unit 8, Objective 23—Computer-to-plate systems
29.	Unit 8, Objective 24—Components of a CTP

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30.	Unit 8, Objective 27—Plate types and their characteristics
31.	Unit 8, Objective 26—Lasers used in CTP system imaging devices
32.	Unit 9: Objective 14—Proper paper handling; Objective 17—Environmental considerations
33.	Unit 8, Objective 5—Dot gain
34.	Unit 8, Objective 2—Color management
35.	Unit 8: Objective 3—Color and printing terminology; Objective 4—Purposes and applications of quality control devices for color management
36.	Unit 8, Objective 4—Purposes and applications of quality control devices for color management; Objective 7—Preflighting files; Objective 8—Preflight checklist;
37.	Unit 9, Objective 3—Digital printing processes; Objective 11—Components of a digital press and their functions; A.S. 1—Research digital imaging
38.	Unit 8, Objective 28—Plate scanning and ink key presetting technologies
39.	Unit 8, Objective 6—Computer integrated manufacturing (CIM)
40.	Unit 8, A.S. 4—Observe computer-to-plate operations at a commercial printer
PrintED Digital Production Printing	
MAVCC Tasks	
1.	Unit 9, Objective 2—Definition of digital printing
2.	Unit 9, Objective 5—Types of jobs produced by digital printing and copying
3.	Unit 9, Objective 6—Typical steps in the digital workflow process
4.	Unit 7, J.S. 9—Transfer files using FTP and e-mail
5.	Unit 8: Objective 1—Terms and definitions; Objective 20—Purposes of a RIP; Objective 21—Functions of a RIP
6.	Unit 9, S.S. 1—File formats supported by different RIP systems
7.	Unit 9, Objective 8—Advantages and disadvantages of file formats commonly used in digital-based printing
8.	Unit 8: Objective 1—Terms and definitions; Objective 17—Proofing systems

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9.	Unit 9, Objective 9—Advantages and disadvantages of digital printing versus offset printing
10.	Unit 8, Objective 17—Proofing systems
11.	Unit 9, Objective 1—Terms and definitions; Unit 10, Objective 7—Types of inks, topcoats, and laminates used in wide-format printing
12.	Unit 9, Objective 12—Qualities of substrates used in digital printing; Unit 10, Objective 8—Types of media commonly used in wide-format printing
13.	Unit 9, Objective 13—Grain direction
14.	Unit 9, Objective 12—Qualities of substrates used in digital printing
15.	
16.	Unit 9, Objective 11—Components of a digital press and their functions
17. 18.	Unit 9, Objective 15—Descriptions of in-line, near-line, and off-line bindery and finishing solutions
19.	Unit 9, Objective 17—Environmental considerations
20.	Unit 9, Objective 16—Safety considerations for digital printing
21.	
22.	Unit 9, S.S. 1—Skills and qualities necessary for a digital printing salesperson, manager, and output specialist
23.	Unit 9, J.S. 1—Demonstrate proper paper handling on a digital press
24.	Unit 5, A.S. 4—Interpret a job ticket; Unit 9, J.S. 4—Execute a print job on a digital press
25.	Unit 9, J.S. 2—Send a job to the RIP
26.	Unit 9, J.S. 3—Release a job from the RIP
27.	Unit 9, J.S. 7—Print two-sided (head-to-head) black digital image
28.	Unit 9, J.S. 8—Print black digital image on coated paper
29.	Unit 9, J.S. 11—Print, fold, and saddle stitch an eight-page color digital image
30.	Unit 9, J.S. 5—Output and perfect bind a book
31.	Unit 9, J.S. 12—Perform preventive maintenance on a digital press
32.	Unit 9, Objective 4—Variable data printing

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33.	Unit 9, Objective 5—Types of jobs produced by digital printing and copying
34.	Unit 9, Objective 6—Typical steps in the digital workflow process
35. 36.	Unit 9, J.S. 6—Output a document utilizing variable data