



Arts, Audio/Video Technology and Communications

Pathway: Printing Technology

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ARPD01.01	Printing	#3: Introduction to Printing Technology #4: Design and Production Technology #5: Advanced Applications of Printing Technology	Apply knowledge of the processes required for the production of various printed products.	Demonstrate the diversity of the printing process to include paper, non-paper substrates, and specialty products.	Identify the printing processes used to create books, money, containers, and wallpaper.
					Identify printing processes used on non-paper substrates, including packaging, mylar, and foils.
					Identify the processes used to print on credit cards, laminates, flooring, pharmaceuticals, and food products.
				Examine the impact of the printing industry on the US economy.	Describe the economic aspects of printing in terms of profit and number of employees involved in the industry.
				Examine the impact of emerging technologies in hardware and software applications.	Describe the expansion of printing with the development of computer applications. Describe the resulting change in lifestyle of printing employees related to technology.
ARPD01.02	Printing	#6: Printing Technology Management	Manage the printing through customer service and sales, scheduling, and quality control.	Apply knowledge of customer needs and expectations with printing services being promoted.	Identify customer requirements, timelines, and budget in a given situation. Verify final costs and ability to produce materials for time specified to customer.

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			(CONTINUED)	Apply knowledge of services, equipment, capabilities, workflow process, data acquisition, and technology to customer service.	Analyze cluster data files to determine compatibility with printing processes.
					Determine if graphics, images, film fonts, inserts, etc. are required for a print job.
					Disseminate customer information to production department.
					Communicate with customer to provide updates in schedule and product status.
				Analyze scheduling processes to ensure timely completion of projects.	Plan project schedule related to job specifications.
					Schedule resources to complete job.
					Monitor project status.
				Identify quality control measures.	Communicate quality standards and expectations for a job to technical production staff.
					Monitor project quality to meet required standards.
					Specify points in process for client approval.
					Demonstrate copying and backup processes for client files.
ARPD01.03	Printing	#7: Pre-Press Technology	Demonstrate preparation of customer materials for imaging.	Demonstrate previewing materials for imaging (pre-flighting).	Analyze client disc files to ensure software and hardware compatibility for the job components.
					Identify required job components including graphics, fonts, and images; transparencies; hard mechanicals; and film.
					Demonstrate resolution of file errors.

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			(CONTINUED)	Apply knowledge of camera and scanner operations to produce images using process photography.	Identify the types of press and types of paper for press gain compensation. Analyze original to determine required reproduction techniques. Demonstrate capturing an image. Differentiate between transmissive versus reflective light. Illustrate understanding of color separation (RGB to CMYK).
				Demonstrate conversion from analog to digital forms, using scanning equipment.	Demonstrate adjusting the scanning equipment for various processes. Demonstrate how to adjust images. Retrieve digital images.
				Demonstrate moving manuscripts into a form that is camera-ready copy.	Use word processing to develop camera-ready copy.
ARPD01.04	Printing	#7: Pre-Press Technology	Analyze image retrieval through refinement, page assembly processes and type set, and trapping.	Identify processes to modify images to conform to layout design.	Comprehend the process of color separation. Identify processes used to manipulate the images to meet specifications.
				Examine page assembly process.	Identify the processes involved in building the document. Identify the steps in preparing files for imaging. Identify problems that can occur in the page assembly process.
				Examine trapping processes.	Define trapping. Identify trapping requirements and processes.

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ARPD01.05	Printing	#8: Printing Processes	Analyze output processes, including digital, film, directive platemaking, and cylinders.	Examine digital output software.	Explain the processes for which CTP, PDF, ADOBE, PS, and DSC would be used.
				Examine film output processes.	Describe the critical elements in creating proofs and films.
				Examine directive processes.	Describe the processes that take output directly to the press.
				Examine platemaking and cylinders as output processes.	Describe platemaking and cylinder-making.
ARPD01.06	Printing	#9: Finishing and Distribution Operations in Printing	Examine the finishing and distribution operations related to printing.	Apply knowledge and skills related to binding processes used to finish printed materials.	Define binding processes, including cutting, folding, and trimming.
					Calculate basic paper counts from a stock sheet.
					Demonstrate folding a single and tri-fold brochure, adapting equipment as needed.
					Identify saddle stitch, perfect bind, and flat stitching in various printed materials.
					Demonstrate basic saddle stitch and simple padding press operations.
				Examine the specialty operations related to finishing.	Define specialty processes.
	Identify embossing, foil stamping, die cutting, and laminating samples in printed materials.				

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			(CONTINUED)	Apply packaging knowledge and skills to provide the customer with delivery of the product as specified.	<p>Identify how paper labels, ink jet labels, and bulk forms are used and printed for packages.</p> <p>State the postal regulations related to packages, contents, size, and destinations.</p> <p>Describe each of the following mail processes and when each is used: sorting, barcodes, bundling, and sacking.</p> <p>Demonstrate meeting customer needs in labeling, packaging, and shipping to meet expected standards.</p>
ARPD01.07	Printing	#8: Printing Processes	Apply knowledge of basic printing processes.	<p>Explain printing processes related to lithographic, planographic, gravure, intaglio, and screen.</p> <p>Examine ink and ink processes used for various types of printing.</p> <p>Apply knowledge of basic printing processes.</p>	<p>Define each process.</p> <p>Identify the processes that are from the surface, below the surface, and through the surface.</p> <p>Describe the product application for each type of process.</p> <p>Identify how to select an ink for a given printing process.</p> <p>Describe how the properties of ink affect coverage, color, and color separation.</p> <p>Explain the application of ink for printing processes, including those from the surface, below the surface, and through the surface.</p> <p>Identify basic offset duplication parts and operation.</p> <p>Perform basic set-up for printing a single color job.</p> <p>Produce a printed single color job using an offset duplicator.</p> <p>Perform basic cleanup and maintenance.</p>