Correlation of

***Modern Cabinetmaking,* Molzahn, DeWerd, Umstattd**

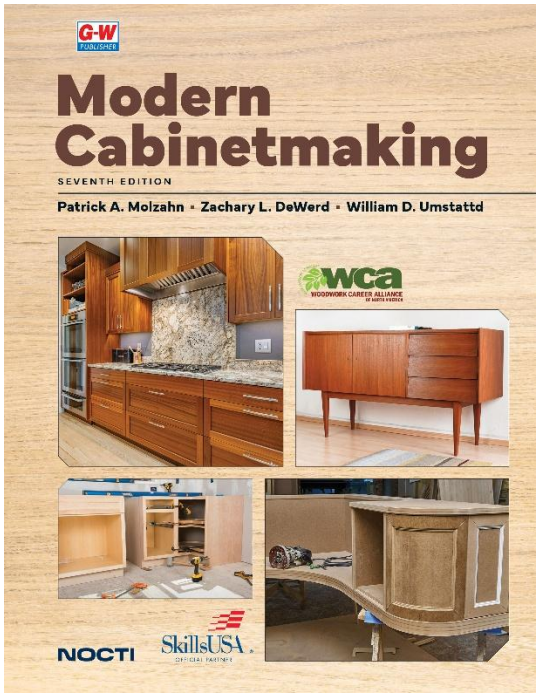
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to

Woodwork Career Alliance: 4. Shaping

The content of the text and Lab Workbook correlates to Woodwork Career Alliance (WCA) skill standards. The WCA establishes a benchmark to measure and recognize an individual's skills and knowledge. The WCA skill standards help ensure that students are prepared for rigorous industry standards, and provide a pathway for advancement for professional woodworkers.

The WCA skill standards define the minimum requirements for specific woodworking machine operations. Using the WCA skill standards in a wood training program can help you, your students, and your program obtain industry recognition. The *Modern Cabinetmaking* textbook and Lab Workbook are correlated to the performance standards, helping prepare your students for certification.



Shaping Considerations

- Pre-Operation Checklist is a prerequisite for ANY operation.
- Tool/machine manufacturer's safety rules and guidelines are followed.
- Stock is supported and secured from movement.
- Hands remain firmly on router throughout entire cut.
- Router is moved in smooth, continuous motion.
- Appropriate stance and hand position are utilized for optimum balance and part control.
- Router bit pointed away from body after completion of a cut.
- Appropriate direction of feed is used to prevent loss of router control (no climb cutting unless explicitly specified).
- Entrance and exit are clean and straight.
- Clears machine and cleans work area after operation.

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- Required OSHA-approved personal protective equipment is worn.
- Disconnect procedure is in place and followed by everyone.
- Process is completed in a timely manner.
- Stock is supported at outfeed.
- Push stick is used when required.
- Stock is fed in smooth, continuous motion past tooling with proper feed rate while controlling stock movement and waste removal.
- Proper stance and hand position are demonstrated.
- Material is fed against the cutter rotation when hand feeding.
- Grain direction is correctly identified and appropriately considered for feed to minimize tearout.
- Demonstrate appropriate feed rate to control stock movement and waste removal relative to the size and type of material being shaped.
- Stock is held securely against the fence, miter gauge, or fixture as appropriate.
- Material is pushed completely past the tooling before releasing it.

Overhead Pin Router

Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
Pre-Operation Checklist				
1	—	**Performance Standard 1.** Verifies cutter is properly installed and guarded with point of operation guard.	Chapter 26	—
1	—	**Performance Standard 2.** Demonstrates knowledge and proper use of start switch, speed selector, and foot pedal.	Chapter 26	—
1	—	**Performance Standard 3.** Verifies dust collector operating.	Chapter 26	—
1	—	**Performance Standard 4.** Raises and lowers quill to enter and exit workpiece.	Chapter 26	—
1	—	**Performance Standard 5.** Selects proper feed direction for internal and external cuts.	Chapter 26	—
2	—	**Performance Standard 1.** Selects and properly installs correct cutter.	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
2	—	**Performance Standard 2.** Selects and adjusts graduated quill depth stops.	Chapter 26	—
2	—	**Performance Standard 3.** Selects and installs correct guide pin or fence.	Chapter 26	—
2	—	**Performance Standard 4.** Loads blank correctly in pattern/template.	Chapter 26	—
2	—	Meets Level 1 performance standard.	—	—
Operation—Pattern/Template Routing				
1	Given a prepared pattern designed to follow a pin bearing on one jig surface, load a blank in the template, and machine a part with curved edges.	**Performance Standard 1.** Dimension tolerance is ±0.4 mm (1/64″) [0.0156″] along the entire curved edge.	Chapter 26	—
1	Given a prepared pattern designed to follow a pin bearing on one jig surface, load a blank in the template, and machine a part with curved edges.	**Performance Standard 2.** The pattern does not come into contact with the cutter.	Chapter 26	—
1	Given a prepared pattern designed to follow a pin bearing on one jig surface, load a blank in the template, and machine a part with curved edges.	**Performance Standard 3.** Machined surface exhibits a uniform smoothness between 15–25 knife cuts per inch (KCPI).	Chapter 26	—
1	Given a prepared pattern designed to follow a pin bearing on one jig surface, load a blank in the template, and machine a part with curved edges.	**Performance Standard 4.** Cut part does not exhibit tearout or burning.	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
2	Given a prepared pattern designed to follow a pin bearing on one jig surface, load a blank in the template, and machine a part with internal and external curved edges.	**Performance Standard 1.** Secures templates appropriately to materials so as not to impede operation of tool.	Chapter 26	—
2	Given a prepared pattern designed to follow a pin bearing on one jig surface, load a blank in the template, and machine a part with internal and external curved edges.	Meets Level 1 performance standard.	—	—

Portable Router

Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
Pre-Operation Checklist				
1	—	**Performance Standard 1.** Demonstrates knowledge of and proper use of all machine specific controls.	Chapter 26	—
1	—	**Performance Standard 2.** Ensures operational path has no obstructions to material and operator.	Chapter 26	—
1	—	**Performance Standard 3.** Verifies sole plate is installed correctly and tight.	Chapter 26	—
1	—	**Performance Standard 4.** Verifies depth adjustment bolt is securely tightened.	Chapter 26	—
1	—	**Performance Standard 5.** Verifies depth collar functions smoothly.	Chapter 26	—
1	—	**Performance Standard 6.** Verifies jigs and/or fixtures are secure and operating effectively.	Chapter 26	—
1	—	**Performance Standard 7.** Verifies switch is off before plugging in tool.	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
2	—	**Performance Standard 1.** Verifies collar and collet seat are clean and in good condition.	Chapter 26	—
2	—	**Performance Standard 2.** Assures cutting tool shank is straight and true.	Chapter 26	—
2	—	**Performance Standard 3.** Installs cutting tool properly.	Chapter 26	—
2	—	**Performance Standard 4.** Verifies cutting tools are secure and free of defects.	Chapter 26	—
2	—	**Performance Standard 5.** Verifies live bearing is clean and properly lubricated.	Chapter 26	—
2	—	**Performance Standard 6.** Installs and properly adjusts required jigs and fixtures.	Chapter 26	—
2	—	**Performance Standard 7.** Verifies face plate is free from obstructions and calibrated to 90° with cutter.	Chapter 26	—
2	—	Meets Level 1 performance standard.	—	—
Operation—Template Cutout				
1	Given material and machine set up and ready to operate, use a 13 mm (1/2″) [0.5″] straight shank carbide bit and template collar, set template, and machine a predetermined cutout in board.	**Performance Standard 1.** Falloff is properly supported prior to the operation.	Chapter 26	Section Project 4-7
1	Given material and machine set up and ready to operate, use a 13 mm (1/2″) [0.5″] straight shank carbide bit and template collar, set template, and machine a predetermined cutout in board.	**Performance Standard 2.** Dimension tolerance of ±0.8 mm (1/32″) [0.03125″] (minus the collar offset) is held for the entire perimeter of the cutout.	Chapter 26	Section Project 4-7

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
1	Given material and machine set up and ready to operate, use a 13 mm (1/2″) [0.5″] straight shank carbide bit and template collar, set template, and machine a predetermined cutout in board.	**Performance Standard 3.** Machined surfaces exhibit uniform cut marks with minimal burn or defects.	Chapter 26	Section Project 4-7
2	Given material, set up equipment with a 13 mm (1/2″) [0.5″] straight shank carbide bit and template collar, set template, and machine a pre-determined cutout in board.	**Performance Standard 1.** Installs correct cutter tool and collar securely.	Chapter 26	—
2	Given material, set up equipment with a 13 mm (1/2″) [0.5″] straight shank carbide bit and template collar, set template, and machine a pre-determined cutout in board.	**Performance Standard 2.** Secures templates appropriately to materials so as not to impede operation of tool.	Chapter 26	—
2	Given material, set up equipment with a 13 mm (1/2″) [0.5″] straight shank carbide bit and template collar, set template, and machine a pre-determined cutout in board.	Meets Level 1 performance standard.	—	—
Operation—Rabbet				
1	Given material and machine set up and ready to operate, use a 13 mm (1/2″) [0.5″] straight shank carbide bit, machine a 13 mm (1/2″ × 1/2″) rabbet in edge of a 610 mm (24″) board.	**Performance Standard 1.** Dimension tolerance of ±0.4 mm (1/64″) [0.0156″] is held for the entire length of the rabbet.	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
1	Given material and machine set up and ready to operate, use a 13 mm (1/2″) [0.5″] straight shank carbide bit, machine a 13 mm (1/2″ × 1/2″) rabbet in edge of a 610 mm (24″) board.	**Performance Standard 2.** Shaped surfaces exhibit minimal tearout.	Chapter 26	—
1	Given material and machine set up and ready to operate, use a 13 mm (1/2″) [0.5″] straight shank carbide bit, machine a 13 mm (1/2″ × 1/2″) rabbet in edge of a 610 mm (24″) board.	**Performance Standard 3.** Machined surfaces exhibit a uniform smoothness with no burning or hesitation marks. Variations accepted for accommodation of difficult grain patterns and materials with defects.	Chapter 26	—
2	Given material, set up equipment with 13 mm (1/2″) [0.5″] straight shank carbide bit, machine a 13 mm (1/2″ × 1/2″) rabbet in edge of a 610 mm (24″) board using an edge guide.	**Performance Standard 1.** Installs and adjusts edge guide properly.	Chapter 26	—
2	Given material, set up equipment with 13 mm (1/2″) [0.5″] straight shank carbide bit, machine a 13 mm (1/2″ × 1/2″) rabbet in edge of a 610 mm (24″) board using an edge guide.	Meets Level 1 performance standard.	—	—
Operation—Dado/Plough/Groove				
1	Given material and machine set up and ready to operate, use a 13 mm (1/2″) [0.5″] straight shank carbide bit, machine a 13 mm (1/2″ × 1/2″) dado inset 1 [25.4 mm] from edge of a 610 mm (24″) board.	**Performance Standard 1.** Dimension tolerances of ±0.4 mm (1/64″) [0.0156″] is held for the entire length of the dado/plough/groove.	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
1	Given material and machine set up and ready to operate, use a 13 mm (1/2″) [0.5″] straight shank carbide bit, machine a 13 mm (1/2″ × 1/2″) dado inset 1 [25.4 mm] from edge of a 610 mm (24″) board.	**Performance Standard 2.** Shaped surfaces exhibit minimal tearout.	Chapter 26	—
1	Given material and machine set up and ready to operate, use a 13 mm (1/2″) [0.5″] straight shank carbide bit, machine a 13 mm (1/2″ × 1/2″) dado inset 1 [25.4 mm] from edge of a 610 mm (24″) board.	**Performance Standard 3.** Machined surfaces exhibit a uniform smoothness with no burning or hesitation marks. Variations accepted for accommodation of difficult grain patterns and materials with defects.	Chapter 26	—
2	Given material, set up equipment with 13 mm (1/2″) [0.5″] straight shank carbide bit and straight edge guide, machine a 13 mm (1/2″ × 1/2″) dado inset 1 [25 mm] from edge of a 610 mm (24) board.	**Performance Standard 1.** Installs and adjusts edge guide properly.	Chapter 26	—
2	Given material, set up equipment with 13 mm (1/2″) [0.5″] straight shank carbide bit and straight edge guide, machine a 13 mm (1/2″ × 1/2″) dado inset 1 [25 mm] from edge of a 610 mm (24) board.	Meets Level 1 performance standard.	—	—
Operation—Mirrored Template Cutout				
1	Given material and equipment set up and ready to operate, use a 0.5″ (1/2″) [13 mm] carbide bit and template collar to route a mirrored set of parts.	**Performance Standard 1.** Depth is accurate ±0.4 mm (1/64″) [0.0156″].	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
1	Given material and equipment set up and ready to operate, use a 0.5″ (1/2″) [13 mm] carbide bit and template collar to route a mirrored set of parts.	**Performance Standard 2.** Mirrored pair does not vary more than ±0.8 mm (1/32″) [0.0312″] at any given point.	Chapter 26	—
1	Given material and equipment set up and ready to operate, use a 0.5″ (1/2″) [13 mm] carbide bit and template collar to route a mirrored set of parts.	**Performance Standard 3.** Machined surfaces exhibit uniform cut marks with minimal burn or defects.	Chapter 26	—
2	Given material and equipment, set up equipment with a 0.5″ (1/2″) [13 mm] carbide bit and template collar, set template and route a mirrored set of parts.	**Performance Standard 1.** Correct cutter tool and collar installed securely.	Chapter 26	—
2	Given material and equipment, set up equipment with a 0.5″ (1/2″) [13 mm] carbide bit and template collar, set template and route a mirrored set of parts.	**Performance Standard 2.** Face plates are free from obstructions, and calibrated to 90° with cutters.	Chapter 26	—
2	Given material and equipment, set up equipment with a 0.5″ (1/2″) [13 mm] carbide bit and template collar, set template and route a mirrored set of parts.	**Performance Standard 3.** Templates secured appropriately to materials.	Chapter 26	—
2	Given material and equipment, set up equipment with a 0.5″ (1/2″) [13 mm] carbide bit and template collar, set template and route a mirrored set of parts.	Meets Level 1 performance standard.	—	—

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Spindle Shaper

Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
Pre-Operation Checklist				
1	—	**Performance Standard 1.** Verifies tool is properly guarded.	Chapter 26	—
1	—	**Performance Standard 2.** Demonstrates knowledge of and proper use of all machine specific controls.	Chapter 26	—
1	—	**Performance Standard 3.** Ensures paths of infeed and outfeed have no obstructions to material and operator.	Chapter 26	—
1	—	**Performance Standard 4.** Verifies jigs and/or fixtures are secure and operating effectively.	Chapter 26	—
1	—	**Performance Standard 5.** Verifies hold-downs are positioned correctly at infeed and outfeed for clearance to feed material.	Chapter 26	—
1	—	**Performance Standard 6.** Verifies dust collection is positioned for effective chip removal.	Chapter 26	—
2	—	**Performance Standard 1.** Verifies cutting tools are secure and free of defects.	Chapter 26	—
2	—	**Performance Standard 2.** Installs cutting tool properly and verifies cutter rotation.	Chapter 26	—
2	—	**Performance Standard 3.** Sets spindle rotation correctly.	Chapter 26	—
2	—	**Performance Standard 4.** Sets spindle speed correctly.	Chapter 26	—
2	—	**Performance Standard 5.** Verifies feed table is free of defects and clean.	Chapter 26	—
2	—	**Performance Standard 6.** Verifies spindle height and/or angle are set to specified dimension(s).	Chapter 26	—
2	—	**Performance Standard 7.** Installs and properly adjusts required jigs and fixtures.	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
2	—	**Performance Standard 8.** Adjusts infeed and outfeed fences to yield correct profile with smooth entry into and exit from part.	Chapter 26	—
2	—	**Performance Standard 9.** Sets infeed and outfeed fences with appropriate clearance to cutter head.	Chapter 26	—
2	—	Meets Level 1 performance standard.	—	—
Operation—Rabbeting				
1	Given material and machine set up and ready to operate, shape a 13 × 13 mm (1/2″ × 1/2″) rabbet in edge of a 610 mm (24″) board.	**Performance Standard 1.** Loads material with appropriate edge and face toward cutter head and table surface.	Chapter 26	—
1	Given material and machine set up and ready to operate, shape a 13 × 13 mm (1/2″ × 1/2″) rabbet in edge of a 610 mm (24″) board.	**Performance Standard 2.** Dimension tolerance of ±0.4 mm (1/64″) [0.0156″] is held for the entire length of the rabbet.	Chapter 26	—
1	Given material and machine set up and ready to operate, shape a 13 × 13 mm (1/2″ × 1/2″) rabbet in edge of a 610 mm (24″) board.	**Performance Standard 3.** Shaped surfaces exhibit a uniform smoothness, 15–25 knife cuts per inch (KCPI), with no burning or hesitation marks.	Chapter 26	—
2	Given material, set up equipment with cutting tool, shape a 13 × 13 mm (1/2″ × 1/2″) rabbet in edge of a 610 mm (24″) board.	Meets Level 1 performance standard.	—	—
Operation—Edge Shape Profiles				
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 1.** Loads material with appropriate edge and face toward cutter head and table surface.	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 2.** Shaped surfaces exhibit a uniform smoothness, 15–25 knife cuts per inch (KCPI), with no burning or hesitation marks.	Chapter 26	—
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 3.** Dimension tolerance is ±0.4 mm (1/64″) [0.0156″] along entire length of material.	Chapter 26	—
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 4.** Shaped surfaces are free of snipe.	Chapter 26	—
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 5.** Shaped surfaces exhibit minimal tearout.	Chapter 26	—
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 6.** Shaped surface meets target profile.	Chapter 26	—
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 7.** Profile is consistent along entire shaped surface, with no visible variation.	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
2	Given material, set up the machine to cut a target edge profile, shape the edge of the material to the specified profile.	Meets Level 1 performance standard.	—	—
Operation—End Shape				
1	Given material, the appropriate jig, the machine set up ready to cut, and a target end profile, shape the end of the material to the specified profile.	**Performance Standard 1.** Loads material with appropriate edge and face toward cutter head and table surface.	Chapter 26	—
1	Given material, the appropriate jig, the machine set up ready to cut, and a target end profile, shape the end of the material to the specified profile.	**Performance Standard 2.** Feeds material in the proper direction for cutter head rotation.	Chapter 26	—
1	Given material, the appropriate jig, the machine set up ready to cut, and a target end profile, shape the end of the material to the specified profile.	**Performance Standard 3.** Shaped surface exhibits a uniform smoothness, 15–25 knife cuts per inch (KCPI), with no burning or hesitation marks.	Chapter 26	—
1	Given material, the appropriate jig, the machine set up ready to cut, and a target end profile, shape the end of the material to the specified profile.	**Performance Standard 4.** Shaped surface is free of snipe and tearout.	Chapter 26	—
1	Given material, the appropriate jig, the machine set up ready to cut, and a target end profile, shape the end of the material to the specified profile.	**Performance Standard 4.** Profile is consistent along entire shaped surface, with no visible variation.	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
2	Given material, the appropriate jig, set up the machine to cut a target end profile, shape the end of the material to the specified profile.	Meets Level 1 performance standard.	—	—
Operation—Edge Shape Using an Automatic Stock Feeder (Power Feed)				
1	Given material, the machine set up ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 1.** Loads material with appropriate edge and face toward cutter head and table surface.	Chapter 26	—
1	Given material, the machine set up ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 2.** Shaped surfaces exhibit a uniform smoothness, 15–25 knife cuts per inch (KCPI), with no burning or hesitation marks.	Chapter 26	—
1	Given material, the machine set up ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 3.** Shaped surfaces exhibit minimal snipe at the entry and exit points.	Chapter 26	—
1	Given material, the machine set up ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 4.** Dimension tolerance of ±0.4 mm (1/64″) [0.0156″] is held for the entire length of the detail.	Chapter 26	—
2	Given material and a target edge profile, set up both the shaper and the feeder to shape the edge of the material to the specified profile.	**Performance Standard 1.** Adjusts stock feeder position and speed settings for control of part.	Chapter 26	—
2	Given material and a target edge profile, set up both the shaper and the feeder to shape the edge of the material to the specified profile.	Meets Level 1 performance standard.	—	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
Operation—Edge Shape Using an Automatic Stock Feeder (Power Feed) and an Outboard Fence				
1	Given material, the machine set up ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 1.** Loads material with appropriate edge and face toward cutter head and table surface.	Chapter 26	—
1	Given material, the machine set up ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 2.** Shaped surfaces exhibit a uniform smoothness, 15–25 knife cuts per inch (KCPI), with no burning or hesitation marks.	Chapter 26	—
1	Given material, the machine set up ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 3.** Shaped surfaces exhibit minimal snipe at the entry and exit points.	Chapter 26	—
1	Given material, the machine set up ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 4.** Dimension tolerance of ±0.4 mm (1/64″) [0.0156″] is held for the entire length of the detail.	Chapter 26	—
2	Given material and a target edge profile, set up both the shaper and the feeder to shape the edge of the material to the specified profile using an outboard fence to ensure uniform widths.	**Performance Standard 1.** Installs outboard fence.	Chapter 26	—
2	Given material and a target edge profile, set up both the shaper and the feeder to shape the edge of the material to the specified profile using an outboard fence to ensure uniform widths.	**Performance Standard 2.** Adjusts stock feeder position and speed settings for control of part.	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
2	Given material and a target edge profile, set up both the shaper and the feeder to shape the edge of the material to the specified profile using an outboard fence to ensure uniform widths.	Meets Level 1 performance standard.	—	—
Operation—Edge Shaped Curved Parts				
1	Given material, jig and machine set up and ready to cut, shape the edge of curved material to a specified profile.	**Performance Standard 1.** Loads material with appropriate edge and face toward cutter head and table surface.	Chapter 26	—
1	Given material, jig and machine set up and ready to cut, shape the edge of curved material to a specified profile.	**Performance Standard 2.** Shaped surfaces exhibit a uniform smoothness, 15–25 knife cuts per inch (KCPI), with no burning or hesitation marks.	Chapter 26	—
1	Given material, jig and machine set up and ready to cut, shape the edge of curved material to a specified profile.	**Performance Standard 3.** Dimension tolerance is ±0.4 mm (1/64") [0.0156"] along entire length of material.	Chapter 26	—
1	Given material, jig and machine set up and ready to cut, shape the edge of curved material to a specified profile.	**Performance Standard 4.** Shaped surfaces are free of snipe.	Chapter 26	—
1	Given material, jig and machine set up and ready to cut, shape the edge of curved material to a specified profile.	**Performance Standard 5.** Shaped surfaces exhibit minimal tearout.	Chapter 26	—
1	Given material, jig and machine set up and ready to cut, shape the edge of curved material to a specified profile.	**Performance Standard 6.** Shaped surface meets target profile.	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
1	Given material, jig and machine set up and ready to cut, shape the edge of curved material to a specified profile.	**Performance Standard 7.** Profile is consistent along entire shaped surface, with no visible variation.	Chapter 26	—
2	Given material and jig, set up and ready to cut, set up machine and shape the edge of curved material to a specified profile.	**Performance Standard 1.** Securely fastens part to jig.	Chapter 26	—
2	Given material and jig, set up and ready to cut, set up machine and shape the edge of curved material to a specified profile.	Meets Level 1 performance standard.	—	—
Operation—Fence and Tilted Spindle				
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 1.** Loads material with appropriate edge and face toward cutter head and table surface.	Chapter 26	—
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 2.** Dimension tolerance of ±0.4 mm (1/64″) [0.0156″] is held for the entire length of the material.	Chapter 26	—
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 3.** Shaped surfaces exhibit a uniform smoothness, 15–25 knife cuts per inch (KCPI), with no burning or hesitation marks.	Chapter 26	—

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Level	Objective	Performance Standards	Textbook Chapter(s)	Lab Workbook Material
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 4.** Shaped surfaces are free of snipe.	Chapter 26	—
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 5.** Shaped surfaces exhibit minimal tearout.	Chapter 26	—
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 6.** Shaped surface meets target profile.	Chapter 26	—
1	Given material, the machine set up and ready to cut, and a target edge profile, shape the edge of the material to the specified profile.	**Performance Standard 7.** Profile is consistent along entire shaped surface, with no visible variation.	Chapter 26	—
2	Given material and a specification, set up the machine to cut a target edge profile, shape the edge of the material to the specified profile.	Meets Level 1 performance standard.	—	—

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