



Woodwork Career Alliance Correlation Chart



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.

3. Milling

Milling Considerations

- Pre-Operation Checklist is a prerequisite for ANY operation.
- Safe hand position and/or push blocks are used when appropriate.
- Appropriate stance is utilized for optimum balance and part control.
- Stock is fed in smooth, continuous motion past cutter head.
- Grain direction as well as bow/warp are correctly identified and appropriately considered for feed.
- Outfeed table is appropriately utilized for purposes of facing/straightening.
- Stock is supported at outfeed.
- Machine and work areas are cleaned after operation.
- Required OSHA-approved personal protective equipment is worn.
- Lock-out/tag-out procedure is in place and followed.
- Process is completed in a timely manner.
- Stock is supported at infeed and outfeed.
- Verifies cutting tools are secure and free of defects.
- Verifies spindle height and/or angle are set to specified dimension(s).

- Proper feed rate is selected to obtain desired finish and maximize tool life.
- Proper stance and hand position are demonstrated when feeding/offloading material.
- Warpage is considered for feed and to minimize tearout.
- Clears machine and cleans work area after operation.
- Tool/machine manufacturer's safety rules and guidelines are followed.
- Demonstrates knowledge of and proper use of all machine specific controls.
- Material is well supported at both infeed and outfeed tables.
- Spot check dimensions following the operation.
- Assesses stock for suitability to determine whether the finished material size can be achieved.
- Grain direction is correctly identified and appropriately considered for feed to reduce tearout.
- Similar amounts of material are removed from both faces of the board.
- Loose chips and debris are removed from infeed table before placement of all stock after every pass.
- Operator clears machine and cleans work area after use.

Jointer

Pre-Operation Checklist				
Level	Objective	Performance Standard	Textbook Chapter	Lab Workbook Material
1		Verifies tool is properly guarded.	Chapter 25	
		Demonstrates knowledge of and proper use of all machine specific controls.	Chapter 25	
		Verifies infeed and outfeed tables are free of debris prior to machining.	Chapter 25	
		Ensures dust collection operable/operating.	Chapter 25	
2		Inspects knives for wear or defects.	Chapter 25	
		Installs and/or properly adjusts guard.	Chapter 25	
		Verifies and/or properly adjusts fence 90° to infeed/outfeed tables.	Chapter 25	
		Verifies outfeed table is set to manufacturer's specification.	Chapter 25	
		Sets depth of cut appropriately.	Chapter 25	
		Verifies tables are clean and polished to facilitate smooth material movement.	Chapter 25	
		Meets Level 1 performance standard.		
Operation—Edge Jointing First Edge				
Level	Objective	Performance Standard	Textbook Chapter	Lab Workbook Material
1	Given material jointed one face and rough sawn edge, 900–1200 mm (3–4') long and a width of 100–150 mm (4–6"), a minimum target width,	Edge is 90° to face of board, measured along entire edge.	Chapter 25	Section Project 5-1
		Edge deviation does not exceed ± 0.4 mm (1/64") [0.0156"] from a flat plane.	Chapter 25	Section Project 5-1

	and machine set up and ready to cut, edge joint first edge.	Edge jointed width allows for final processing to target width.	Chapter 25	Section Project 5-1
		Machined surface exhibits a uniform smoothness between 15–25 knife cuts per inch (KCPI).	Chapter 25	Section Project 5-1
		Edge is free of snipe.	Chapter 25	Section Project 5-1
		No burn or hesitation marks are visible on surface being machined.	Chapter 25	Section Project 5-1
2	Given material jointed one face and rough sawn edge, at least twice the length of outfeed table, a minimum target width, set up and adjust machine, edge joint first edge.	Meets Level 1 performance standard.		
Operation—Face Jointing				
Level	Objective	Performance Standard	Textbook Chapter	Lab Workbook Material
1	Given rough sawn, unjointed material 900–1200 mm (3–4') long and a width of 100–150 mm (4–6"), a target thickness, and machine set up and ready to cut, face joint material.	Face deviation does not exceed ± 0.4 mm ($1/64''$) [$0.0156''$] per foot from a flat plane.	Chapter 25	
		Face jointed thickness allows for final processing to target thickness.	Chapter 25	
		Machined surface exhibits a uniform smoothness between 15–25 knife cuts per inch (KCPI).	Chapter 25	
		Board exhibits minimal tearout.	Chapter 25	
		Board is free of snipe.	Chapter 25	
		No burn or hesitation marks are visible on surface being machined.	Chapter 25	
		Face is marked to indicate jointed surface.	Chapter 25	

2	Given rough sawn, unjointed material at least twice the length of outfeed table and a width of 100–150 mm (4–6”), a minimum target thickness, set up and adjust machine, face joint material.	Meets Level 1 performance standard.		
---	---	-------------------------------------	--	--

Thickness Planer

Pre-Operation Checklist				
Level	Objective	Performance Standard	Textbook Chapter	Lab Workbook Material
1		Verifies tool is properly guarded.	Chapter 24	
		Verifies dust collection operable/operating.	Chapter 24	
		Ensures paths of infeed and outfeed have no obstructions to material and operator.	Chapter 24	
		Staggers loading to ensure entire width of bed is used.	Chapter 24	
		Minimum part length is observed.	Chapter 24	
2		Inspects knives for wear or defects.	Chapter 24	
		Verifies tables are clean and polished to facilitate smooth material movement.	Chapter 24	
		Proper stock removal rates are selected given material type.	Chapter 24	
		Meets Level 1 performance standard.		

Operation—Planing for Thickness				
Level	Objective	Performance Standard	Textbook Chapter	Lab Workbook Material
1	Given material (flattened on one side), a target thickness greater than 6 mm (1/4") [0.25"], feed rate pre-selected, and machine set up and ready to cut, plane material to specified thickness.	Final planed surface exhibits minimal tearout or chip-out.	Chapter 24	Section Project 5-1
		Proper incremental adjustment made on each pass to reach specified thickness.	Chapter 24	Section Project 5-1
		Sets optimum initial thickness prior to first pass based on maximum thickness or species of material.	Chapter 24	Section Project 5-1
		Final thickness dimension tolerance is ± 0.4 mm (1/64") [0.0156"] across entire surface of material.	Chapter 24	Section Project 5-1
		Planed surface is free of or has minimal snipe (taking into account what is normal for a given machine).	Chapter 24	Section Project 5-1
2	Given material (flattened on one side), a target thickness greater than 6 mm (1/4") [0.25"], set up equipment and plane material to specified thickness.	Verifies/sets feed speed to meet surface quality specification—15–25 knife cuts per inch (KCPI). Variations accepted for accommodation of difficult grain patterns and materials with defects. Any tearout must be able to be removed without excessive sanding, scraping, etc.	Chapter 24	
		Meets Level 1 performance standard.		