

Cabinetry and Fine Woodworking (2026)

PROFESSIONAL ORGANIZATIONS AND LEADERSHIP 1.0

1 Student Leadership in Career Technical Student Organizations (CTSO) and Professional Associations 1.1

- 1 Explore the role of professional organizations and/or associations in the Cabinetry and Woodworking industry. 1.1.1
- 2 Define the values, roles, and opportunities provided through career technical student organizations. 1.1.2
- 3 Engage in career exploration and leadership development. 1.1.3

LAB ORGANIZATION AND SAFETY SKILLS 2.0

1 General Safety 2.1

- 1 Describe general shop safety rules, procedures and housekeeping duties. 2.1.1
- 2 Describe the roles of the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) pertaining to workplace safety. 2.1.2
- 3 Describe the requirements for using personal protective equipment (PPE) during work activities, including safety glasses, ear protection, gloves, and shoes. 2.1.3
- 4 Wear appropriate clothing for lab/shop activities. 2.1.4
- 5 Secure hair and jewelry for lab/shop activities. 2.1.5
- 6 Describe proper lifting procedures and proper use of support equipment. 2.1.6
- 7 Describe ventilation requirements for working within the lab/shop area. 2.1.7
- 8 Describe the location and procedures for using types of fire extinguishers and other fire safety equipment. 2.1.8
- 9 Identify the location and procedures for using eye wash stations. 2.1.9
- 10 Identify the location of the posted building diagram for evacuation routes. 2.1.10
- 11 Identify the location of safety data sheets (SDS) and the information they contain. 2.1.11
- 12 Complete work assignments, following verbal and written instructions. 2.1.12
- 13 Describe the requirements of the OSHA-10 safety course. 2.1.13

HAND AND POWER TOOLS 3.0

1 Hand Tools 3.1

- 1 Identify hand tools common to cabinetmaking and woodworking. 3.1.1
 - 2 Demonstrate safe and proper techniques for using hand tools. 3.1.2
 - 3 Maintain hand tools (i.e., cleaning, storing, identifying defects). 3.1.3
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2 Power Tools and Machinery 3.2

- 1 Identify power tools and machinery common to cabinetmaking and woodworking. 3.2.1
 - 2 Demonstrate safe and proper techniques for using power tools and machinery. 3.2.2
 - 3 Maintain power tools and machinery (i.e., cleaning, storing, identifying defects). 3.2.3
 - 4 Apply appropriate cut speeds and feed rates, based on materials and operation. 3.2.4
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FUNDAMENTAL DESIGN 4.0

1 Elements of Design 4.1

- 1 Describe the history and characteristics of cabinetry and furniture design styles. 4.1.1
- 2 Describe elements of design (e.g., shapes, textures, lines, colors). 4.1.2
- 3 Describe principles of design (e.g., harmony, symmetry, repetition, balance, proportion). 4.1.3
- 4 Identify designed components (i.e., consumer choices) of cabinets and furniture. 4.1.4
- 5 Describe the relationship between the function and form of a cabinet or piece of furniture. 4.1.5
- 6 Identify common dimensions of furniture and cabinets. 4.1.6
- 7 Describe practical consumer requirements for cabinets and furniture in everyday living. 4.1.7
- 8 Describe common design modifications and requirements of the Americans with Disabilities Act (ADA). 4.1.8
- 9 Plan a finished product based on client requirements and specifications. 4.1.9

2 Print Reading Techniques 4.2

- 1 Interpret basic elements of plans and prints (e.g., annotation, dimensions, line types). 4.2.1
- 2 Define industry standard print reading terminology. 4.2.2
- 3 Describe types of drawings (e.g., assembly, pictorial, orthographic, isometric, schematic). 4.2.3
- 4 Identify components of plans and prints (e.g., dimensioning, sectional drawings, fasteners, tables, charts, assembly drawings). 4.2.4
- 5 Create a materials list from plans and prints. 4.2.5
- 6 Create a plan of procedure. 4.2.6
- 7 Create a cut list from plans and prints. 4.2.7

3 Measuring Techniques 4.3

- 1 Identify industry standard units of measure (e.g., standard, decimal, metric). 4.3.1
- 2 Define industry standard measurement terms (e.g., board feet, linear, square feet). 4.3.2
- 3 Measure to the nearest 1/16th inch with a tape measure. 4.3.3
- 4 Measure geometric shapes (e.g., arcs, circles, angles, compound angles, tapers). 4.3.4

4 Mathematical Concepts 4.4

- 1 Convert between imperial and metric measurements. 4.4.1
- 2 Add, subtract, multiply and divide fractions, decimals, and whole numbers. 4.4.2
- 3 Convert between fractions and decimals. 4.4.3
- 4 Determine the cost of materials needed for a furniture/cabinetmaking project. 4.4.4

5 Layout Principles and Practices 4.5

- 1 Interpret drawing, sketch, and specification information. 4.5.1
 - 2 Prepare work area for layout. 4.5.2
 - 3 Select materials and tools to complete work assignment. 4.5.3
 - 4 Lay out project, using layout and marking tools. 4.5.4
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MATERIALS AND HARDWARE 5.0

1 Materials 5.1

- 1 Identify the major materials used in furniture and cabinetmaking (e.g., hardwood, softwood, composites, laminates, veneers, edge treatment) and their characteristics. 5.1.1
 - 2 Define materials terminology (e.g., kiln dry, grain, defect, lumber grade, face grade, sanded). 5.1.2
 - 3 Describe environmental impacts related to material choice. 5.1.3
 - 4 Describe how environmental conditions and climate can affect materials. 5.1.4
 - 5 Describe how production is affected by the availability, quality, and quantity of resources. 5.1.5
 - 6 Compare applications of raw materials, standard stock, and finished products. 5.1.6
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2 Fasteners and Methods 5.2

- 1 Identify fasteners (e.g., type, purpose, application). 5.2.1
 - 2 Categorize fastening methods by their applications. 5.2.2
 - 3 Describe fastening methods for materials (e.g., toenailing, countersinking, pocket screws, dowels, biscuits, dominos). 5.2.3
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3 Adhesives and Methods 5.3

- 1 Identify various adhesives (e.g., glues, contact adhesives, edge banding adhesives). 5.3.1
 - 2 Define common terminology (e.g., open assembly time, closed assembly time, shelf life). 5.3.2
 - 3 Describe adhesive methods for materials. 5.3.3
 - 4 Compare adhesive characteristics that affect assembly time, cure time, and strength of the product. 5.3.4
 - 5 Demonstrate cleanup procedures for common adhesives. 5.3.5
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4 Hardware 5.4

- 1 Describe common types of hardware (e.g., hinges, handles, drawer slides, knobs, pulls) and their applications. 5.4.1
 - 2 Lay out hardware selected for the application. 5.4.2
 - 3 Install and adjust hardware, as needed. 5.4.3
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MANUFACTURING PROCESSES 6.0

1 Manufacturing 6.1

- 1 Describe current manufacturing processes (e.g., lean manufacturing, layout, milling, joinery, sanding, assembly, finishing, installation). 6.1.1

2 Milling Operations 6.2

- 1 Identify terms used with milling tools (e.g., kerf, grain, drilling, boring, counterboring, countersinking). 6.2.1
- 2 Select milling tools for specific operations (e.g., table saw, drill press, joiner, band saw, jigsaw, router). 6.2.2
- 3 Square a board. 6.2.3
- 4 Cut lumber and sheet goods, using safe handling techniques. 6.2.4
- 5 Cut material, using a jig and template. 6.2.5
- 6 Perform operations on workpieces, using select safety devices (e.g., feather boards, holders, power feeders). 6.2.6

3 Computer Numerical Control (CNC) 6.3

- 1 Describe the applications of CNC technology. 6.3.1
- 2 Define the programming and setup of CNC. 6.3.2
- 3 Describe common CNC problems and troubleshooting methods. 6.3.3
- 4 Compare the advantages and disadvantages of using CNC. 6.3.4

4 Joinery Techniques 6.4

- 1 Identify terminology associated with joinery techniques (e.g., doweling, blind dado, confirmat, floating tenon, tongue & groove, dado/rabbet, miter, dovetail). 6.4.1
- 2 Compare the advantages and disadvantages of joinery types. 6.4.2
- 3 Select the joinery type, joinery tools, and machinery best suited for specific operations. 6.4.3
- 4 Construct dado, miter, rabbet, and butt joints. 6.4.4

5 Sanding 6.5

- 1 Define terms used with sanding processes and techniques (e.g., grit, belt, disc, hand). 6.5.1
- 2 Prepare a surface for treatment or finish. 6.5.2
- 3 Describe application methods for various types of filler materials. 6.5.3
- 4 Select the best tool and abrasive for shaping and smoothing materials. 6.5.4
- 5 Select the grit number and sequences for shaping and smoothing operations. 6.5.5
- 6 Describe health and safety procedures that should be followed when working with abrasives and fillers. 6.5.6

6 Assembly 6.6

- 1 Define terms used with assembly procedures (e.g., dry fitting, clamping, gluing). 6.6.1
- 2 Select the best assembly tools for specific operations (e.g., c-clamps, bar clamps, pipe clamps). 6.6.2
- 3 Demonstrate assembly and clamping procedures. 6.6.3
- 4 Assemble a project, using common case construction techniques (e.g., face frame, frameless). 6.6.4
- 5 Assemble a project, using common frame and panel construction techniques (e.g., stile, rail, panel). 6.6.5
- 6 Assemble a project, using furniture construction techniques. 6.6.6
- 7 Construct a project that includes a drawer and a door. 6.6.7
- 8 Check the accuracy and squareness of a project, using specific quality control criteria. 6.6.8
- 9 Apply laminates (e.g., plastic, veneers, edge treatment) to a project. 6.6.9

7 Finishing 6.7

- 1 Identify terms and products used in finishing procedures (e.g., staining, clear coating, solvent, water-based). 6.7.1
- 2 Select finishing tools and materials for specific operations. 6.7.2
- 3 Apply various finishes, using application methods. 6.7.3
- 4 Clean up finishing products and equipment. 6.7.4
- 5 Describe health and safety procedures that should be followed when working with finishes. 6.7.5

8 Cabinet Installation 6.8

- 1 Describe cabinet layout and installation techniques. 6.8.1
 - 2 Describe countertop layout, materials, and installation techniques. 6.8.2
 - 3 Check walls and floors for level and plumb. 6.8.3
 - 4 Determine fasteners needed for walls. 6.8.4
 - 5 Describe upper and lower cabinets installation (e.g., other casework, mantels, floating shelves, hood vents). 6.8.5
 - 6 Describe countertop installation. 6.8.6
 - 7 Install molding and trim. 6.8.7
 - 8 Adjust doors and drawers. 6.8.8
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**CABINETS AND
MILLWORK
INDUSTRY 7.0**

1 Career Exploration 7.1

- 1 Describe employment opportunities in the industry. 7.1.1
- 2 Describe the economic variables affecting the industry. 7.1.2
- 3 Create a project portfolio. 7.1.3
- 4 Describe education and training options for various career pathways in the industry. 7.1.4
- 5 Describe worker's rights and responsibilities. 7.1.5