

# CARPENTRY COMPETENCY PROFILE



## **Employability Skills**

- Utilizes Communication Technology
- Construct a Career Portfolio
- Give and Receive Constructive Feedback
- Establish and Maintain Professionalism
- Proven Problem-Solving Ability
- Introduced to Basic Concepts of Self-Employment
- Understands Concept of Corporations, Partnerships, and Sole Proprietorships
- Recognizes Basic Payroll Practices
- Understands Concept of Licensing
- Explains the Basics of Establishing a Business Plan
- Explains the Basics of Small Business Administration
- Recognizes the Basic Concepts of Acquiring Loans and Financing
- Explains Profit, Debt, Assets, and Liabilities
- Constructs Basic Cost Estimates
- Identifies healthy lifestyles that reduce the risk of chronic disease, unsafe habits and abusive behavior
- Analyzes How Professional, Ethical and Legal Behavior Contributes to Continuous Improvement in Organizational Performance and Regulatory Compliance
- Applies Cyber Hygiene Principles
- Describes Call Before You Dig Procedures

## **Construction Math**

- Determines Surface Area
- Determines Volume
- Determines Perimeter
- Calculates Board Foot
- Measures to 1/16" Accuracy
- Demonstrates Level and Plumb
- Demonstrates 3-4-5 Squaring Methods
- Converts Fractions to Decimals
- Converts Decimals to Fractions
- Measures Dimensions with Architects Ruler
- Demonstrates Arc Scribe Methods
- Bisects Lines and Angles
- Determines Angles, Opposite & Adjacent Angles
- Determine Length of an Arc
- Calculate a Hypotenuse with Pythagorean Theorem
- Estimates Basic Material Needs

## **Personal/Workplace Safety**

- Safely Handle Materials
- Mitigates General Worksite Hazards
- OSHA 10-hour Certificate
- Blood Borne Pathogen Clean up
- Demonstrate Lock Out Tag Out
- Inspect and Erect Ladders and Perry Scaffolding
- Sets-Up & Uses Ladder Jacks & Picks
- Sets-Up & Uses Pump Jack Systems
- Sets-Up & Uses Roof Jacks & Picks
- Identify Safety Signs, Exits and Alarms
- Identify Fire Classification Types (ABCD)
- Explains PASS & RACE Procedures
- Operates Fire Extinguishers
- Locate and Interpret Safety Data Sheets
- Maintain Proper Workspace Housekeeping

Select Don and Maintain Required P.P.E  
Don's PFAS Harness and Lanyards  
Establishes Anchor Points For PFAS  
Demonstrates Basic First Aid and CPR  
Communicates Basic Operator Hand Signals

## **General Carpentry**

Describes Coniferous and Deciduous Species  
Identifies Basic American Softwood Lumber Species  
Identifies Basic American Hardwood Lumber Species  
Identifies OSB, Plywood, MDF, Particle Board  
Identifies LVL, Glulam and LSL Lumber  
Selects Blades to Task  
Drill/Chisel Stock  
Utilize Hand Planers to Shape Stock  
Describes Nominal & Actual Lumber Dimensions  
Establishes Grade Benchmarks  
Measures Grade Differences with Rotary Levels  
Measures Grade Differences with Transits  
Utilizes Three Axis Laser Levels for Layout  
Determines Angle of Elevation  
Sets-Up Batter Boards and Pulls String Lines  
Locates and Interprets IRC & IBC Code Books  
Demonstrates Dado, Rabbet, & Half-Lap Joints  
Demonstrates Miter, Finger & Dovetail Joints  
Demonstrates Mortise & Tenon Joinery  
Demonstrates Pocket Hole Joinery  
Identifies Common & Box Framing Nails i.e., 16D, 10D, 8D, 6D, 4D  
Identifies Common Finishing & Casing Nails  
Identifies Common Construction Screws & Anchors  
Selects Sanding Grits to Task & Desired Finish

## **Carpentry Framing**

Describes Riftsawn, Plainsawn Quartersawn Methods  
Identifies Platform, Balloon, Post & Beam Framing  
Identifies Floor Framing Components  
Installs Sill Sealer, Plates and Bolts/Straps  
Layout Basic Floor Systems  
Cut and Install Floor Framing Components  
Cuts and Installs Stairway Openings  
Install Subflooring with Adhesives and Fasteners  
Identify Wall Framing Components  
Strike Wall Locations and Locate Partitions  
Layout Walls and Rough Openings  
Cut and Install Wall Framing Components  
Installs Fire/Draft Blocking and Cribbing  
Identify Roof Framing Components  
Cut and Install Gable Roof Framing Components  
Cut and Install Hip Roof Framing Components  
Frames Dormers  
Constructs Eaves & Soffit Returns  
Describes Stairway Types and Components  
Describes General Stair Codes  
Layout and Cut Stair Basic Stair Stringers  
Installs Skirt Boards, Balustrades and Handrails  
Cut and Install Light Gauge Steel Framing Members  
Interprets Basic Construction Drawings  
Installs Wind Bracing on Exterior Walls  
Installs Metal Structural Bracing (i.e., hangers)  
Installs Prefabricated Roof Trusses with Hardware

Installs Wood Floor Trusses  
Installs Sturd-I-Floor Systems  
Installs 12" Concrete Pier Tube Forms & Anchors  
Installs 4x4 & 4x6 Post Anchor Brackets  
Cut and Install Door & Window Casings  
Cut, Cope and Install Base & Shoe Moldings  
Cut, Cope and Install Crown Moldings  
Cut, Cope and Install Chair Rail  
Installs House Wrap  
Constructs & Uses a Story Pole  
Installs Carriage Bolts & Structural Timber Screws  
Install Ledger Boards & Joist Hangers

## **Equipment & Power Tool Operation**

Cuts/Shapes Stock with Reciprocating Saws  
Cuts/Shapes Stock with Saber Saws  
Cuts/Shapes with Circular Saws  
Cuts/Shapes with Compound Miter Saws  
Operates Abrasive Wheel Cut-Off Saw  
Cuts/Shapes with Table Saw  
Cuts/Shapes with Panel Saw  
Set-Up and Uses Tracks Saws  
Operates Plunge and Fix Based Routers  
Set-Up and Operates Router Tables  
Operates/Shapes Stock with Industrial Surface Planer  
Operates/Shapes Stock with Joiner  
Operates/Shapes Stock with Bandsaws  
Operates Portable Bandsaw  
Cuts Tile with Wet Saw  
Selects & Uses Pneumatic Tools & Fasteners to Task  
Operates Portable Air Compressor  
Selects & Uses Cordless Nailers & Fasteners to Task  
Operates Biscuit Joiner  
Operates Power Hand Planer  
Operates Dedicated Mortiser  
Operates Orbital & Finishing Sanders  
Operates Drill Press  
Operates Bench Grinders  
Operates Hand-Held Grinders  
Operates Powder Actuated Tools  
Operates Hammer Drills  
Operates Corded Hole Shooter  
Operates Flush Cut Saw  
Telehandler Operators Certificate  
Skid-Steer Operators Certificate  
Scissor Lift Operators Certificate  
Telescoping Bucket Lift Operators Certificate  
Mini Excavator Operators Certificate

## **Interior Coverings & Finishes**

Repair Damaged Wall/Ceiling Surfaces  
Measures, Cuts & Installs 1/2" & 5/8" Drywall  
Demonstrates Level 2 Drywall Finishing  
Installs Metal & Plastic Corner Beads  
Prime/Prepare Wall Surfaces  
Select and Apply Proper Paint and Sheen  
Repair Suspended Ceiling Components  
Repair/Install VCT Flooring  
Repair/Install Ceramic Flooring

Repair/Install Hardwood Flooring  
Install, Plumb & Level Pre-Hung Doors  
Fabricate, Plumb & Level Door Jams & Stops  
Install Crown Moldings  
Repair/Install Standard Door Locks  
Install Prefab Wall & Base Cabinets  
Applies Silicone & Latex Caulk

### **Exterior Finish**

Compares Roof Types & Materials  
Install Vinyl Siding, Channel, Soffits  
Bend and Install Fascia Coil Stock  
Installs Roofing Paper  
Installs Ice & Water Guard  
Bends and/or Installs Drip Edge  
Lay out and Install 3-Tab Roofing Shingles  
Lay out and Install Dimensional Roofing Shingles  
Install Ridge Vents  
Apply Caulking/Sealant  
Repair/Replace Weather Stripping  
Install New Construction Windows  
Replace Window Screening  
Installs Corrugated Steel Siding  
Installs Corrugated Steel Roofing