

STATE OF WYOMING
ARCHITECTURE AND CONSTRUCTION CLUSTER AND
CABINETMAKING & WOODWORKING PATHWAY COMPETENCIES

ARCHITECTURE AND CONSTRUCTION CLUSTER

Cluster Level Core Competencies & Objectives

COMPETENCY

AC1 The student will understand and apply Occupational Safety and Health Standards (OSHA)

OBJECTIVES

- AC1-1 Demonstrate knowledge of and apply safety concepts related to the safe use of hand-tools, power/pneumatic tools, clothing and hair
 - Examples: carrying tools properly, use of safety guard, inspection of tools, changing blades and bits
- AC1-2 Demonstrate knowledge of and employ proper maintenance, set-up and inspection procedures for tools
 - Examples: lubrication, cords, hoses, connections, placing of switch, safety guards
- AC1-3 Demonstrate knowledge of the use and purpose of personal protective equipment (PPE)
 - Examples: respirators, safety glass, steel toed shoes, fall protection, hard-hats, hearing, etc.
- AC1-4 Demonstrate familiarity with emergency situations and procedures, including: use and location of first aid supplies, fire extinguishers, eye washers, understanding of blood pathogens, and evacuation procedures
- AC1-5 Follow safe procedures when handling materials
 - Examples: Proper lifting and carrying, material stacking and storage

COMPETENCY

AC2 The student will be able to demonstrate knowledge of applied mathematics

OBJECTIVES

- AC2-1 Perform basic arithmetic functions with real numbers
- AC2-2 Convert fractions/decimals
- AC2-3 Convert metric/inch measurement
- AC2-4 Perform basic trigonometric and geometric functions, solving for unknown angles and sides
- AC2-5 Demonstrate measurement skills
- AC2-6 Calculation: add, subtract, multiply and divide with fractions

COMPETENCY

AC3 The student will demonstrate knowledge of the different career paths and opportunities within a pathway

- Example: Layout and assemble a floor deck using dimensional lumber

Example: Technical Drafting – Student demonstrates an awareness of possible careers related to Technical Drafting and an awareness of the academic preparation needed to qualify for those possible careers

Architecture and Construction Cluster
CABINETMAKING AND WOODWORKING PATHWAY

Pathway Core Competencies & Objectives

COMPETENCY

ACCW1 The student will demonstrate knowledge of the safe use of stationary and portable power tools

OBJECTIVES

- ACCW1-1 Demonstrate safe use of stationary power tools for woodworking (set up, inspection, operation)
- Table Saw
 - Radial Arm Saw
 - Band Saw
 - Scroll Saw
 - Band of Scroll Saw
 - Surface Planer
 - Jointer
 - Drill Press
 - Sanding Machine
 - Power Miter Saw
 - Router Table
- ACCW1-2 Demonstrate the purposes and proper use of hand-held power tools (set up, inspection, operation):
- Routers,
 - Nail Guns
 - Power Drills & Drivers
 - Pneumatic Tools
 - Portable Sanders
 - Other Machines on a program-by-program basis

COMPETENCY

ACCW2 The student will demonstrate basic applied math and measuring concepts

OBJECTIVES

- ACCW2-1 Use tape measure to create an accurate measurement within a tolerance (using sixteenths)
- ACCW2-2 Use basic math skills to calculate materials needed and estimate project costs

COMPETENCY

ACCW3 The student will demonstrate a knowledge of design, planning and estimation process

OBJECTIVES

- ACCW3-1 Read and use a blue print to plan and create a project
- ACCW3-2 Use a material list
- ACCW3-3 Use a procedure list

COMPETENCY

ACCW4 The student will identify materials accurately

OBJECTIVES

- ACCW4-1 Identify wood types (hardwoods, softwoods, manufactured)
- ACCW4-2 Identify appropriate use of woods for a specific purpose (e.g., use of manufactured vs. hardwood/softwood)

COMPETENCY

ACCW5 The student will cut and shape components accurately

OBJECTIVES

- ACCW5-1 Choose tools for specific operations
- ACCW5-2 Employ order of operations to true and square a board
- ACCW5-3 Demonstrate truing and squaring a board
- ACCW5-4 Demonstrate basic joinery (dado, edge, miter, lap, rabbit, butt)

COMPETENCY

ACCW6 The student will demonstrate knowledge of the use of fasteners and adhesives

OBJECTIVES

- ACCW6-1 Describe the common types of adhesives and fasteners used in construction work and explain their uses
- ACCW6-2 Choose appropriate fastener for the task (glues, joinery, nails, screws)
- ACCW6-3 Demonstrate knowledge of clamping techniques (e.g., types of clamps and how long to apply clamps)
- ACCW6-4 Select and install hardware (hinges, drawer slides, handles)

COMPETENCY

ACCW7 The student will demonstrate finishing techniques

OBJECTIVES

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| ACCW7-1 | Able to choose appropriate sanding technique for the task (tools, grit, abrasive type) |
| ACCW7-2 | Demonstrate appropriate sanding techniques (visible flaws and machine marks removed, sanding with the grain) |
| ACCW7-3 | Demonstrate knowledge of and use of safe handling and clean-up of lacquers, paints, stains, wood fillers |
| ACCW7-4 | Demonstrate knowledge of and use of Material Safety Data Sheets |

Note: We would like to acknowledge that some schools within the state currently or will in the future offer the following. However, these topics are NOT OFFERED STATEWIDE due to size or time limitations and as such, competencies have not been identified at this time.

- Mass production processes, company organization, product pricing,
- Entrepreneurship/Custom furniture and fine custom cabinetry
- Cabinet installation
- Transportation issues: handling and damage reduction, proper placement and protection during transportation
- Wood bending and laminating processes
- Countertop types and methods (granite, solid surface, laminates, tile, veneer, metal)
- Advanced techniques: face frame, raised panel, casework (faceframe or European styles)
- Engraving and decoration (computer machining, CNC router, CNC lathe, CNC laser)