



**BUILDING MAINTENANCE  
TECHNOLOGY  
BUILDING MAINTENANCE  
TECHNICIAN - PLUMBING  
SKILLS STANDARDS  
OD43702**

## ***COMPETENCY-BASED EDUCATION: OKLAHOMA'S RECIPE FOR SUCCESS***

### ***BY THE INDUSTRY FOR THE INDUSTRY***

Oklahoma's *CareerTech* system of competency-based education uses industry professionals and certification standards to identify the knowledge and abilities needed to master an occupation. This industry input provides the foundation for development of instructional materials that help prepare the comprehensively trained, highly skilled employees demanded by our workplace partners.

### ***TOOLS FOR SUCCESS***

*CareerTech* relies on three basic instructional components to deliver competency-based instruction: skills standards, curriculum materials, and competency assessments.

**Skills standards** provide the foundation for competency-based instruction in Oklahoma's *CareerTech* system. The skills standards outline the knowledge, skills, and abilities needed to perform related jobs within an industry. Skills standards are aligned with national skills standards; therefore, a student trained to the skills standards possesses technical skills that make him/her employable in both state and national job markets.

**Curriculum materials** contain information and activities that teach students the knowledge and skills outlined in the skills standards. In addition to complementing classroom instruction, curriculum resources provide supplemental activities to enhance learning and provide hands-on training experiences.

**Competency Assessments** test the student over material outlined in the skills standards and taught using the curriculum materials. When used with classroom performance evaluations, written competency assessments provide a means of measuring occupational readiness.

Although each of these components satisfy a unique purpose in competency-based education, they work together to reinforce the skills and abilities students need to gain employment and succeed on the job.

### ***MEASURING SUCCESS***

Written competency assessments are used to evaluate student performance. Results reports communicate competency assessment scores to students and provide a breakdown of assessment results by duty area. The results breakdown shows how well the student has mastered skills needed to perform major job functions and identifies areas of job responsibility that may require additional instruction and/or training.

Group analysis of student results also provides feedback to instructors seeking to improve the effectiveness of career and technology training. Performance patterns in individual duties indicate opportunities to evaluate training methods and customize instruction.

### ***TRUE TO OUR PURPOSE***

"Helping Oklahomans succeed in the workplace" defines the mission of Oklahoma *CareerTech* and its competency-based system of instruction. Skills standards, curriculum, and assessments that identify and reinforce industry expectations provide accountability for programs and assure *CareerTech*'s continued role in preparing skilled workers for a global job market

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**BUILDING MAINTENANCE TECHNOLOGY  
 BUILDING MAINTENANCE TECHNICIAN - PLUMBING  
 SKILLS STANDARDS  
 Desired Skill Level Ratings**

- Duty A: State Codes and Regulations
- Duty B: Tools and Their Use
- Duty C: Select Parts/Materials and Use
- Duty D: Repair/Replace Valves
- Duty E: Repair/Replace Waste Parts
- Duty F: Repair and Replace Water Heater Components
- Duty G: Preparation of Plumbing Pipe/Fittings
- Duty H: Install/Repair Non-License Required Appliances
- Duty I: Prepare Maintenance Records
- Duty J: Perform Maintenance and Repair Activities

**Desired Skill Level:** The level of training necessary for the student to be employable in the occupation specified:

- 4 – Skilled                      Can perform the task independently with no additional training
- 3 – Moderately Skilled      Has performed the task independently during training program; limited additional training may be required
- 2 – Limited Exposure         Has practiced task during training program; additional training is required to develop the skills
- 1 – No Exposure                No experience or knowledge in this area
- \* - Not Rated                    Tasks included for the benefit of the student’s development only

**\*DSL = Desired Skill Level**

**DUTY A: State Codes and Regulations**

CODE	TASK	DSL
A.01	Interpret State Code/Local laws and regulations	3
A.02	Select work that can be completed without a license	4

**DUTY B: Tools and Their Use**

CODE	TASK	DSL
B.01	Select common/specific tool and use	4
B.02	Maintain tools	4

**DUTY C: Select Parts/Materials Use**

CODE	TASK	DSL
C.01	Select fixture, valves, accessories for use	3
C.02	Conduct plumbing layout procedures	3
C.03	Interpret plumbing drainage/water blue prints	3
C.04	Select repair materials	3

**DUTY D: Repair/Replace Valves**

CODE	TASK	DSL
D.01	Select faucet/use	3
D.02	Repair/replace flush valves	3
D.03	Repair or replace defective faucets and parts	3

**DUTY E: Repair/Replace Waste Parts**

CODE	TASK	DSL
E.01	Locate drainage line	2
E.02	Repair or replace defective drainage fittings <ul style="list-style-type: none"> <li>• Repair/replace fixture traps</li> </ul>	4
E.03	Clean drain obstructions	3

**DUTY F: Repair and Replace Water Heater Components**

CODE	TASK	DSL
F.01	Determine water heater type and size	2
F.02	Adjust temperature control for electric/gas water heater	3
F.03	Check safeties on water heaters	3
F.04	Drain/clean water heater	2
F.05	Check/clean vents of gas fired water heater	3

**DUTY G: Preparation of Plumbing Pipe/Fittings**

CODE	TASK	DSL
G.01	Measure fittings, pipe	4
G.02	Cut, ream, and thread steel pipe	4
G.03	Prepare, cut, clean, and solvent weld plastic pipe	4
G.04	Prepare DWV pipe and fittings	4
G.05	Clean, cut, ream, and solder copper pipe/fittings	4
G.06	Level/grade pipe	4

**DUTY H: Install/Repair Non-License Required Appliances**

<b>CODE</b>	<b>TASK</b>	<b>DSL</b>
H.01	Identify work allowed on appliances without a license	4
H.02	Troubleshoot electrical appliances	4
H.03	Repair/clean garbage disposal	3
H.04	Replace cords	3
H.05	Level/balance appliances	3

**DUTY I: Prepare Maintenance Records**

<b>CODE</b>	<b>TASK</b>	<b>DSL</b>
I.01	Order materials needed for a job	3
I.02	Schedule labor needed for job	3
I.03	Prepare preventative maintenance schedules	3
I.04	Record preventative maintenance activities	3
I.05	Check performance of corrective maintenance/repair on machinery	3

**DUTY J: Perform Maintenance and Repair Activities**

<b>CODE</b>	<b>TASK</b>	<b>DSL</b>
J.01	Maintain professional relationship with customers	4
J.02	Maintain professional relationship with supervisor/workers	4
J.03	Purchase required repair parts	3
J.04	Clean up work area	4
J.05	Care/maintenance of tools	4
J.06	Care/maintenance of service trucks	4
J.07	Manage time	4