

# PIPING TRADES

## STUDENT GRADE RECORD *Career & Technical Education* WINDHAM SCHOOL DISTRICT

Student Name \_\_\_\_\_

TDCJ # \_\_\_\_\_

Social Security Number \_\_\_\_\_

Certified Craft Instructor \_\_\_\_\_

Certified Craft Instructor Code \_\_\_\_\_

Unit \_\_\_\_\_

WSD Certificate	Y / N
If I were hiring for this position, I would: (check one) <input type="checkbox"/> 0-No recommendation at this time. (Cannot be used for Completers.)  <input type="checkbox"/> 1-Hire this person and look no further.  <input type="checkbox"/> 2-Interview this person along with other applicants  <input type="checkbox"/> 3-Not hire this person.	
<b>Complete only if student attempted industry certification.</b>	
Name of Industry Certificate	Code      P/F
NCCER, Core	0300
NCCER, Plumbing, Level-I	0351
NCCER, Pipefitting, Level-I	0353
CSSO	0102
OSHA	0100

*I attest that all of the information reported on this form is true.*

\_\_\_\_\_  
*Certified Craft Instructor Signature*

*Date of Report – CORE* \_\_\_\_\_

*Date of Report – CSSO* \_\_\_\_\_

*Date of Report – Pipefitting Level I* \_\_\_\_\_

*Date of Report – Plumbing Level I* \_\_\_\_\_

\_\_\_\_\_  
*Sponsor Representative*

Course Outline Modules	Industry Module Test	Industry Module Performance	Module Competency Rating
<b>CORE</b>			
0. CTE Orientation			
1. Basic Safety- 00101-09			
2. Introduction to Construction Math- 00102-09			
3. Introduction to Hand Tools- 00103-09			
4. Introduction to Power Tools- 00104-09			
5. Introduction to Construction Drawings- 00105-09			
6. Basic Rigging- 00106-09			
7. Basic Communication Skills- 00107-09			
8. Basic Employability Skills- 00108-09			
9. Introduction to Materials Handling- 00109-09			
<b>PIPEFITTING LEVEL-I</b>			
10. Orientation to the Trade- 08101-06			
11. Pipefitting Hand Tools- 08102-06			
12. Pipefitting Power Tools- 08103-06			
13. Oxyfuel Cutting - 08104-06			
14. Ladders and Scaffolds- 08105-06			
15. Motorized Equipment- 08106-06			
<b>PLUMBING LEVEL-I</b>			
16. Intro. to the Plumbing Profession -02101-12			
17. Plumbing Safety- 02102-12			
18. Tools of the Plumbing Trade- 02103-12			
19. Introduction to Plumbing Math- 02104-12			
20. Introduction to Plumbing Drawings 02105-12			
21. Plastic Pipe and Fittings- 02106-12			
22. Copper Tube and Fittings- 02107-12			
23. Cast-Iron Pipe and Fittings- 02108-12			
24. Steel Pipe and Fittings- 02109-12			
25. Introduction to Plumbing Fixtures- 02110-12			
26. Int. to Drain Waste and Vent Systems- 02111-12			
27. Intro.to Water Distribution Systems-02112-12			

<i>Windham Module Test Average</i>	x . 75	a	Completer
<i>Windham End of Course Exam</i>	x . 25	b	
<i>Windham Module Score (a + b=)</i>			70+
<i>% Competencies Completed</i>			70+
<i>Module Competency Rating</i>			2.7+

I hereby authorize the NCCER Registry Department to verify information in my craft training records to Sponsor Representatives upon request. I release and hold harmless the National Center for Construction Education and Research for this verification process.

Signature \_\_\_\_\_

Date \_\_\_\_\_

# PIPING TRADES

## STUDENT PROGRESS RECORD

### RECORDING DIRECTIONS

SKILL RATING: Post the student's competency rating for each skill performed.

MODULE TEST SCORE: Enter the student's test score for the module.

MODULE RATING: Use the following scale to determine module rating.

[4] **Skilled**- Can perform competencies independently with no supervision.

[3] **Moderately Skilled**- Can perform competencies with limited supervision.

[2] **Limited Skill**- Requires instruction and close supervision to perform competencies.

**Note:** When evaluating a student's module rating, skill performance should be given priority.

### CORE

#### 0.CTE Orientation

Teacher Student

Initial Initial

- |       |  |       |   |
|-------|--|-------|---|
| _____ |  | _____ | 1. Identify employment opportunities related to the course.   |
| _____ |  | _____ | 2. Identify the number of classroom hours a student must attend to be considered as a completer.  |
| _____ |  | _____ | 3. Identify the industry-recognized certification.  |
| _____ |  | _____ | 4. Identify course expectations including: <ul style="list-style-type: none"> <li>• Working conditions</li> <li>• Attendance expectations</li> <li>• Instructor's expectations</li> </ul> |

#### 1. Basic Safety- 00101-09

*Module Test Score* \_\_\_\_\_

*Minimum 100% Required*

\_\_\_\_\_ *Module Rating (4, 3, 2)*

- |       |  |       |  |
|-------|--|-------|--|
| _____ |  | _____ | 1. Inspect personal protective equipment (PPE) to determine if it is safe to use (PPE should include safety goggles, hard hat, gloves, safety harness and safety shoes). |
| _____ |  | _____ | 2. Properly don and remove PPE (safety goggles, hard hat, and fall protection).  |
| _____ |  | _____ | 3. Demonstrate safe lifting procedures.  |
| _____ |  | _____ | 4. Set up an extension ladder properly.  |
| _____ |  | _____ | 5. Demonstrate three-point contact on a ladder.  |

#### 2. Introduction to Construction Math- 00102-09

*Module Test Score* \_\_\_\_\_

This is knowledge-based; there is no performance test.

#### 3. Introduction to Hand Tools- 00103-09

*Module Test Score* \_\_\_\_\_

\_\_\_\_\_ *Module Rating (4, 3, 2)*

- |       |  |       |  |
|-------|--|-------|--|
| _____ |  | _____ | 1. Visually inspect the following tools to determine if they are safe to use: <ul style="list-style-type: none"> <li>• Hammer</li> <li>• Screwdriver</li> <li>• Saw</li> </ul> |
|-------|--|-------|--|

- |       |  |       |  |
|-------|--|-------|--|
| _____ |  | _____ | 2. Make a straight square cut using a crosscut saw.  |
| _____ |  | _____ | 3. Safely and properly use a minimum of three of the following tools: <ul style="list-style-type: none"> <li>• Hammer and cat's paw (to drive and pull nails)</li> <li>• Screwdriver (slotted and Phillips)</li> <li>• Adjustable wrench</li> <li>• CHANNELLOCK® pliers</li> <li>• Spirit level</li> <li>• Carpenter's square and steel tape</li> <li>• Saw</li> </ul> |

#### 4. Introduction to Power Tools- 00104-09

*Module Test Score* \_\_\_\_\_

\_\_\_\_\_ *Module Rating (4, 3, 2)*

- |       |  |       |  |
|-------|--|-------|--|
| _____ |  | _____ | 1. Safely and properly use three of the following tools: <ul style="list-style-type: none"> <li>• Electric drill</li> <li>• Circular saw</li> <li>• Saw Zall®</li> <li>• Pneumatic power nailer</li> </ul> |
|-------|--|-------|--|

#### 5. Introduction to Construction Drawings- 00105-09

*Module Test Score* \_\_\_\_\_

\_\_\_\_\_ *Module Rating (4, 3, 2)*

- |       |  |       |  |
|-------|--|-------|--|
| _____ |  | _____ | 1. Using the floor plan supplied with this module: <ul style="list-style-type: none"> <li>• Locate the wall common to both interview rooms.</li> <li>• Determine the overall width of the structure studio.</li> <li>• Find the distance from the outside east wall to the center of the beam in the structure studio.</li> <li>• Find the elevation of the slab.</li> </ul> |
|-------|--|-------|--|

#### 6. Basic Rigging- 00106-09

*Module Test Score* \_\_\_\_\_

\_\_\_\_\_ *Module Rating (4, 3, 2)*

- |       |  |       |  |
|-------|--|-------|--|
| _____ |  | _____ | 1. Select and inspect appropriate slings for a lift.           |
| _____ |  | _____ | 2. Given various loads, determine the proper hitch to be used. |

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- \_\_\_\_\_ 3. Select and inspect appropriate hardware and/or lifting equipment.
- \_\_\_\_\_ 4. Demonstrate and/or simulate the proper techniques for connecting hitches.
- \_\_\_\_\_ 5. Demonstrate the proper use of all hand signals according to ANSI B30.2 and B30.5.
- \_\_\_\_\_ 6. Describe or demonstrate pre-lift safety checks.
- \_\_\_\_\_ 7. Demonstrate and/or simulate how to lift the load level.
- \_\_\_\_\_ 8. Describe and/or demonstrate safety precautions for attaching and disconnecting a load.

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## 7. Basic Communication Skills- 00107-09

*Module Test Score* \_\_\_\_\_

*Module Rating (4, 3, 2)*

- \_\_\_\_\_ 1. Fill out a work-related form supplied by your instructor. (Handouts 4 and 5 are sample forms and are provided in the AIG for this module as an optional resource.)
- \_\_\_\_\_ 2. Read instructions for how to properly don a safety harness; orally instruct another person to don the apparatus.
- \_\_\_\_\_ 3. Perform given task after listening to oral instructions.

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## 8. Basic Employability Skills- 00108-09

*Module Test Score* \_\_\_\_\_

*Module Rating (4, 3, 2)*

- \_\_\_\_\_ 1. Demonstrate the ability to access, retrieve, and print from the following basic software programs:
  - Email
  - Databases
  - internet

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## 9. Introduction to Materials Handling- 00109-09

*Module Test Score* \_\_\_\_\_

*Module Rating (4, 3, 2)*

- \_\_\_\_\_ 1. Demonstrate proper materials-handling techniques.

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## PIPEFITTING LEVEL-I

### 10. Orientation to the Trade – 08101-06

*Module Test Score* \_\_\_\_\_

This is knowledge-based; there is no performance test.

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### 11. Pipefitting Hand Tools- 08102-06

*Module Test Score* \_\_\_\_\_

*Module Rating (4, 3, 2)*

- \_\_\_\_\_ 1. Identify various pipefitting hand tools.
- \_\_\_\_\_ 2. Secure a section of pipe in a vise and pipe stand.
- \_\_\_\_\_ 3. Proper use:
  - Straight pipe wrenches
  - Offset pipe wrenches
  - Chain wrenches
  - Strap wrenches
- \_\_\_\_\_ 4. Proper use:
  - Laser level
  - Torpedo and larger levels
  - Tubing water level
  - Center finder
- \_\_\_\_\_ 5. Check square and level:
  - Turn tongue 180 degrees from where it was
  - Flip level to ensure it is level

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### 12. Pipefitting Power Tools- 08103-06

*Module Test Score* \_\_\_\_\_

*Module Rating (4, 3, 2)*

- \_\_\_\_\_ 1. Cut pipe using a portable band saw (do not use threading machine).
- \_\_\_\_\_ 2. Operate a portable grinder.
- \_\_\_\_\_ 3. Replace dies in a threading machine.
- \_\_\_\_\_ 4. Cut, ream, and thread pipe using a threading machine.
- \_\_\_\_\_ 5. Cut and thread nipples using a nipple chuck.
- \_\_\_\_\_ 6. Thread pipe using a portable power drive.
- \_\_\_\_\_ 7. Identify several types of pipe bevelers.

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### 13. Oxyfuel Cutting- 08104-06

*Module Test Score* \_\_\_\_\_

*Module Rating (4, 3, 2)*

- \_\_\_\_\_ 1. Set up oxyfuel equipment.
- \_\_\_\_\_ 2. Light and adjust an oxyfuel cutting torch.
- \_\_\_\_\_ 3. Shut down oxyfuel cutting equipment.
- \_\_\_\_\_ 4. Disassemble oxyfuel equipment.
- \_\_\_\_\_ 5. Change empty cylinders.
- \_\_\_\_\_ 6. Perform straight line and square shape cutting.
- \_\_\_\_\_ 7. Perform piercing and slot cutting.
- \_\_\_\_\_ 8. Perform bevel cutting
- \_\_\_\_\_ 9. Perform washing.

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## 14. Ladders and Scaffolds- 08105-06

Module Test Score \_\_\_\_\_

Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Select, inspect, and use stepladders.
- \_\_\_\_\_ 2. Select, inspect, and use straight and extension ladders.
- \_\_\_\_\_ 3. Erect, inspect, and disassemble tubular buck scaffolding.

## 15. Motorized Equipment- 08106-06

Module Test Score \_\_\_\_\_

Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Perform all prestart checks for engine-driven generators.
- \_\_\_\_\_ 2. Set up and operate engine-driven welding machines.
- \_\_\_\_\_ 3. Operate engine-driven generators.
- \_\_\_\_\_ 4. Perform all prestart checks for portable air compressors.
- \_\_\_\_\_ 5. Operate portable air compressors.
- \_\_\_\_\_ 6. Identify portable pumps to use for specific applications.
- \_\_\_\_\_ 7. Identify forklift trucks and recognize safety hazards involved in working around them.
- \_\_\_\_\_ 8. Identify types of hydraulic cranes and recognize safety hazards involved in working around them.

## PLUMBING LEVEL-I

### 16. Introduction to the Plumbing Profession- 02101-12

Module Test Score \_\_\_\_\_

This is knowledge-based; there is no performance test.

### 17. Plumbing Safety- 02102-12

Module Test Score \_\_\_\_\_

Minimum 100% Required

Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Inspect the following personal protective equipment:
  - Gloves
  - Body Harness
  - Hard Hat
  - Safety Glasses
  - Safety Shoes
  - Hearing Protection
- \_\_\_\_\_ 2. Put on the following personal protective equipment:
  - Hard Hat
  - Body Harness
  - Eye Protection
  - Gloves

- Hearing Protection
- Safety shoes

- \_\_\_\_\_ 3. Demonstrate proper use of ladders.
- \_\_\_\_\_ 4. Inspect power tools (corded and cordless) to ensure they are safe to use.
- \_\_\_\_\_ 5. Inspect hand tools to ensure they are safe to use.
- \_\_\_\_\_ 6. Demonstrate/simulate the proper methods of lockout/tag-out for energy sources.

### 18. Tools of the Plumbing Trade - 02103-12

Module Test Score \_\_\_\_\_

Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Identify plumbing tools.
- \_\_\_\_\_ 2. Properly use plumbing tools.
- \_\_\_\_\_ 3. Demonstrate proper maintenance and storage of hand and power tools.

### 19. Introduction to Plumbing Math- 02104-12

Module test Score \_\_\_\_\_

Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Measure pipe using the following methods:
  - End-to-end
  - End-to-center
  - Center-to-center
  - End-to-face
  - Face-to-face
  - Face-to-throat
- \_\_\_\_\_ 2. Determine end-to-end dimension by figuring fitting allowances and thread makeup.

### 20. Introduction to the Plumbing Drawings- 02105-12

Module Test Score \_\_\_\_\_

Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Sketch an orthographic and isometric drawing.

### 21. Plastic Pipe and Fittings- 02106-12

Module Test Score \_\_\_\_\_

Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Select correct types of materials for plastic piping systems.
- \_\_\_\_\_ 2. Identify types of fittings and valves and their uses.
- \_\_\_\_\_ 3. Select the appropriate personal protective equipment for working with plastic piping.
- \_\_\_\_\_ 4. Properly measure, cut, and join plastic piping.
- \_\_\_\_\_ 5. Select the correct support and spacing for the application.

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## 22. Copper Tube and Fittings- 02107-12

Module Test Score \_\_\_\_\_

\_\_\_\_\_ Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Select correct types of materials for copper tube systems.
- \_\_\_\_\_ 2. Identify types of fittings and valves and their uses.
- \_\_\_\_\_ 3. Select the appropriate personal protective equipment for working with copper tube.
- \_\_\_\_\_ 4. Correctly measure, cut, ream, and join copper tube.
- \_\_\_\_\_ 5. Select the correct support and spacing for the application.

## 23. Cast-Iron Pipe and Fittings- 02108-12

Module Test Score \_\_\_\_\_

\_\_\_\_\_ Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Select correct types of materials for cast-iron piping systems.
- \_\_\_\_\_ 2. Identify types of fittings and their uses.
- \_\_\_\_\_ 3. Select the appropriate personal protective equipment for cast-iron piping.
- \_\_\_\_\_ 4. Correctly measure, cut, and join cast-iron pipe.
- \_\_\_\_\_ 5. Select the correct hanger or support and spacing for the application.

## 24. Steel Pipe and Fittings- 02109-12

Module Test Score \_\_\_\_\_

\_\_\_\_\_ Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Identify the common types of materials, schedules, sizes, and labels used for steel piping.
- \_\_\_\_\_ 2. Identify the common fittings and valves used with steel piping.
- \_\_\_\_\_ 3. Properly measure, cut, and join steel piping.
- \_\_\_\_\_ 4. Identify the hazards and safety precautions associated with steel piping.
- \_\_\_\_\_ 5. Identify the various techniques used in hanging and supporting steel piping.

## 25. Introduction to Plumbing Fixtures- 02110-12

Module Test Score \_\_\_\_\_

\_\_\_\_\_ Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Identify the most commonly installed fixtures and appliances..

## 26. Introduction to Drain, Waste, Vent (DWV) Systems- 02111-12

Module Test Score \_\_\_\_\_

\_\_\_\_\_ Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Sketch an isometric drawing of a simple DWV system and label its components.

## 27. Introduction to Water Distribution Systems- 02112-12

Module Test Score \_\_\_\_\_

\_\_\_\_\_ Module Rating (4, 3, 2)

- \_\_\_\_\_ 1. Sketch an isometric drawing of a simple water distribution system and label its components.

\_\_\_\_\_ Number of Skills Completed ÷

90 Number of Skills on *Level I Piping/Plumbing Trades* =

\_\_\_\_\_ % of Skills Comp

**Conference**

Date: \_\_\_\_\_ Hours in class: \_\_\_\_\_

Comments:

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Teacher initial: \_\_\_\_\_ Student initial: \_\_\_\_\_