

## **NOTE ON PERFORMANCE TESTING**

Performance Profile Sheet(s) are included in a format that can be easily photocopied for each trainee. Performance tests are designed to measure competency in the tasks taught in each module.

Please note the number of tasks to be tested while teaching each module. Each trainee should be tested on all the tasks listed on the Performance Profile Sheet(s). Before performance testing, the instructor should brief the trainees on:

- Test objectives and criteria
- Safety precautions
- Procedures for each task to be tested

The instructor administering the performance testing should also do the following:

- Ensure that all of the needed equipment is available and operating properly.
- Set up the testing stations.
- Organize and administer the test in a way that allows for optimal performance.
- Complete the Performance Profile Sheet(s) for each trainee by assigning a pass/fail score for each listed task. Also, include the testing date for each task in the rating box.
- Monitor adherence to all safety regulations and precautions.
- Provide adequate supervision to prevent injuries.
- Take immediate and effective action to remedy any emergency.

### **Performance Testing**

If Performance Testing is done as part of the National Center for Construction Education and Research Standardized Craft Training Program, the following conditions must be met:

1. The Craft Instructor must hold valid NCCER instructor certification for the craft being tested.
2. The training must be delivered through a Accredited Training Sponsor recognized by NCCER.
3. For every module, the specific performance testing must be completed to the satisfaction of the instructor.
4. The results of the testing must be recorded on the Training Report Form 200. This form must be provided to the local Accredited Training Sponsor to be forwarded to the NCCER National Registry.



**Module 12305-03 has no Performance Profile Sheet;  
no performance testing is required for this module.**

**Craft: Industrial Maintenance E & I Technician**

**Module Number: 40207-08**

**Module Title: Process Mathematics**



Contren® Learning Series

TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
2	1. Find the point where Fahrenheit equals Celsius.	
2	2. Do three temperature conversions, using figures provided by your instructor.	
3	3. Calculate differential pressure using values provided by your instructor.	
3	4. Calculate the volume of a vessel using variables provided by your instructor.	

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**Craft: Industrial Maintenance E & I Technician**

**Module Number: 40209-08**

**Module Title: Tubing**



Contren® Learning Series

TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
5	1. Bend copper tubing at 45-degree and 90-degree angles using a compression-type bender.	
4	2. Cut and deburr copper tubing using a hacksaw or tubing cutter.	
4	3. Cut and deburr stainless steel tubing.	

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**Craft: Industrial Maintenance E & I Technician**

**Module Number: 40211-08**

**Module Title: Instrument Drawings and Documents, Part One**



Contren® Learning Series

TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
1 – 6	1. Locate and identify drawing elements as specified by your instructor.	

<p><b>Craft: Instrumentation</b></p> <p><b>Module Number: 12104-01</b></p> <p><b>Module Title: Electrical Systems for Instrumentation</b></p>	<p><b>STANDARDIZED CRAFT TRAINING SERIES</b></p>
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TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
3	1. Under the supervision of the instructor, measure and record the current, voltage, and resistance in a DC circuit.	
5	2. Using any two of the measured values, calculate the power consumed by the circuit.	

**Craft: Instrumentation**

**Module Number: 12208-03**

**Module Title: Relays and Timers**



TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
2, 4, 5, 6	1. Select and install various types of relays.	
9	2. Select and install various types of timers.	



**Craft: Instrumentation**

**Module Number: 12209-03**

**Module Title: Switches and Photoelectric Devices**



TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
1, 2, 3, 4	1. Select and install various switches.	
6, 7	2. Select and install various photoelectric devices.	

**Craft: Industrial Maintenance E & I Technician**

**Module Number: 40209-08**

**Module Title: Tubing**



Contren® Learning Series

TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
5	1. Bend copper tubing at 45-degree and 90-degree angles using a compression-type bender.	
4	2. Cut and deburr copper tubing using a hacksaw or tubing cutter.	
4	3. Cut and deburr stainless steel tubing.	

continued

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**Craft: Industrial Maintenance E & I Technician**

**Module Number: 40209-08**

**Module Title: Tubing**



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Objective	TASK	RATING
7	4. Install a flare fitting on a section of copper tubing.	
8	5. Properly make up an instrument tubing connection with a compression fitting, then loosen and re-tighten it.	

**Craft: Industrial Maintenance E & I Technician**

**Module Number: 40309-09**

**Module Title: Layout and Installation of  
Tubing and Piping Systems**



Contren® Learning Series

TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
1	1. Given a partial system equipment location diagram (one loop) and observing all considerations covered in this module, create an isometric drawing of the given loop.	
2, 3	2. Measure and bend the tubing sections in the loop and select the fittings needed to install the layout shown in the isometric drawing in Performance Task #1.	
7	3. Indicate the types and locations of minimal support needed for the tubing installation.	
8	4. Make up compression fittings on tubing.	

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**Craft: Industrial Maintenance E & I Technician**

**Module Number: 40210-08**

**Module Title: Clean, Purge, and Test Tubing and Piping Systems**



Contren® Learning Series

TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
6	1. Set up and perform a pressure leak test.	
6	2. Inspect the system to verify there is no leakage.	
3	3. Perform a blowdown/purge.	
7	4. Document the test results and restore the system to be service-ready.	

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**Craft: Industrial Maintenance E & I Technician**

**Module Number: 40302-09**

**Module Title: Electronic Components**



Contren® Learning Series

TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

<b>Objective</b>	<b>TASK</b>	<b>RATING</b>
6	1. Using a cross reference manual, identify a substitute for a selected electronic component.	
5	2. Build a simple bridge rectifier circuit and view the results.	
12	3. Check diodes.	

**Craft: Instrumentation**

**Module Number: 12212-03**

**Module Title: Panel-Mounted Instruments**



TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
2	1. Lay out an instrument panel.	
3	2. Install an instrument in a panel.	

**Craft: Instrumentation**

**Module Number: 12213-03**

**Module Title: Installing Field-Mounted Instruments**



TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
2	1. Fabricate a floor-mounted instrument stand.	
3	2. Install an orifice plate between two flanges.	
3	3. Assemble and install a thermowell assembly on a section of 4-inch process piping.	

continued



**Craft: Instrumentation**

**Module Number: 12213-03**

**Module Title: Installing Field-Mounted Instruments**



Objective	TASK	RATING
4	4. Identify selected pipe flange facings.	
4	5. Identify selected pipe flange gaskets.	
4	6. Install a three-valve manifold on a differential pressure transmitter using futbols.	

**Craft:** Instrumentation

**Module Number:** 12306-03

**Module Title:** Grounding and Shielding of Instrumentation Wiring



TRAINEE NAME: \_\_\_\_\_

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Also, list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
1, <del>2</del>	1. Identify and explain the function of an equipment ground in a given drawing.	
6	2. Draw an example of a ground loop.	
7	3. Identify and explain the function of an equipment shield in a given drawing.	

**Module 12408-03 has no Performance Profile Sheet;  
no performance testing is required for this module.**