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:

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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.

Certified Plus Credential

Provided the sponsor is working through an NCCER-Accredited Assessment Center, candidates who successfully pass performance testing may be eligible for a Certified Plus Credential. A number of NCCER’s Performance Profiles cross over to NCCER’s Assessment Performance Verifications and may be completed simultaneously. Go to www.nccer.org and select the Assessments tab to locate the Performance Verifications associated with this craft. Note two other important conditions are required for the Certified Plus Credential:

1. Candidates must first pass the associated written assessment.
2. An NCCER-Accredited Assessment Administrator must sign off on the Performance Verification before it is submitted to NCCER.
Module 26101-11 has no Performance Profile Sheet; no performance testing is required for this module.
Objective TASK RATING

1 1. Perform a visual inspection on various types of ladders.

1 2. Set up a ladder properly to perform a task.

1 3. Properly don a harness.

continued
Craft: Electrical
Module Number: 26102-11
Module Title: Electrical Safety

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>3, 4, 5</td>
<td>4. Perform a hazard assessment of a job such as replacing the lights in your classroom.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Discuss the work to be performed and the hazards involved.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Locate the closest phone to the work site and ensure that the local emergency telephone numbers are either posted at the phone or known by you and your partner(s).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Plan an escape route from the location in the event of an accident.</td>
<td></td>
</tr>
</tbody>
</table>
Module 26103-11 has no Performance Profile Sheet; no performance testing is required for this module.
Module 26104-11 has no Performance Profile Sheet; no performance testing is required for this module.
**Objective TASK**

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2</td>
<td>1. Use <strong>NEC Article 90</strong> to determine the scope of the NEC®. State what is covered by the NEC® and what is not.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2. Find the definition of the term <em>feeder</em> in the NEC®.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3. Look up the NEC® specifications that you would need to follow if you were installing an outlet near a swimming pool.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4. Find the minimum wire bending space for two 1/0 AWG conductors installed in a junction box or cabinet and entering opposite the terminal.</td>
<td></td>
</tr>
</tbody>
</table>

Copyright © 2011 National Center for Construction Education and Research. Permission is granted to reproduce this page provided that copies are for local use only and that each copy contains this notice.
### Objective 3
1. Identify the appropriate box type and size for a given application.

### Objective 4
2. Select the minimum size pull or junction box for the following applications:
   - Conduit entering and exiting for a straight pull
   - Conduit entering and exiting at an angle

---

**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.

**Certified Plus Credential:**
Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.
**Objective TASK**

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1. Make 90-degree bends, back-to-back bends, offsets, kicks, and saddle bends using a hand bender.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2. Cut, ream, and thread conduit.</td>
<td></td>
</tr>
</tbody>
</table>
## Objective TASK

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1. Identify and select various types and sizes of raceways, fittings, and fasteners for a given application.</td>
</tr>
<tr>
<td>4</td>
<td>2. Demonstrate how to install a flexible raceway system.</td>
</tr>
<tr>
<td>5</td>
<td>3. Terminate a selected raceway system.</td>
</tr>
<tr>
<td>6</td>
<td>4. Identify the appropriate conduit body for a given application.</td>
</tr>
</tbody>
</table>

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Objective TASK

4 1. Install conductors in a raceway system.

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Objective TASK

4 1. Using an architect's scale, state the actual dimensions of a given drawing component.

5, 6 2. Make a material takeoff of the lighting fixtures specified in Performance Profile Sheet 2 using the drawing provided on Performance Profile Sheet 3. The takeoff requires that all lighting fixtures be counted, and where applicable, the total number of lamps for each fixture type must be calculated.
## LIGHTING FIXTURE TAKEOFF

<table>
<thead>
<tr>
<th>Lighting Fixture Type</th>
<th>Manufacturer and Catalog Number</th>
<th>Number and Type of Lamps</th>
<th>Total Number of Fixtures</th>
<th>Total Number of Lamps for Fixture Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA</td>
<td>Lithonia LB 440</td>
<td>4-F40CS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FB</td>
<td>Lithonia LB 240</td>
<td>2-F20U</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC</td>
<td>Lithonia LP/RFB-3</td>
<td>INCL.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Hitek TWP 150</td>
<td>1-450HPS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EX</td>
<td>Lithonia XSIG-EL</td>
<td>INCL.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EM</td>
<td>Lithonia ELU-2</td>
<td>INCL.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Craft: Electrical

Module Number: 26110-11

Module Title: Basic Electrical Construction Drawings

For Performance Task Two, please refer to the 11" × 17" Drawing included with this Exam
For a residential dwelling of a given size, and equipped with a given list of major appliances, demonstrate or explain how to:

1. Compute the lighting, small appliance, and laundry loads.
2. Compute the loads for large appliances.
3. Determine the number of branch circuits required.
4. Size and select the service-entrance equipment (conductors, panelboard, and protective devices).
<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2</td>
<td>2. Using an unlabeled diagram of a panelboard (Performance Profile Sheet 3), label the lettered components.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>3. Select the proper type and size outlet box needed for a given set of wiring conditions.</td>
<td></td>
</tr>
</tbody>
</table>
Identify the Components:

(A) MAIN SERVICE PANEL
(B) FEEDER
(C) NEUTRAL BUS
(D) GROUNDED CONDUCTOR
(E) DUPLEX RECEPTACLE
(F) BRANCH CIRCUIT
(G) GROUNDING CONDUCTOR
(H) GROUND BUS
(I) SUBPANEL
**Objective TASK**

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2</td>
<td>1. Under instructor supervision, measure the voltage in your classroom from line to neutral and neutral to ground.</td>
<td></td>
</tr>
<tr>
<td>1, 2</td>
<td>2. Under instructor supervision, use an ohmmeter to measure the value of various resistors.</td>
<td></td>
</tr>
</tbody>
</table>
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Module 26201-11 has no Performance Profile Sheet; no performance testing is required for this module.
### PERFORMANCE PROFILE SHEET

**Craft:** Electrical  
**Module Number:** 26202-11  
**Module Title:** Motors: Theory and Application

---

**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:**
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---

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<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1. Collect data from a motor nameplate.</td>
<td></td>
</tr>
<tr>
<td>6, 7, 8</td>
<td>2. Identify various types of motors and their application(s).</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>3. Connect the terminals for a dual-voltage motor.</td>
<td></td>
</tr>
</tbody>
</table>
Craft: Electrical
Module Number: 26203-11
Module Title: Electric Lighting

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.

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<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1. Read and interpret information given in lamp manufacturers’</td>
<td></td>
</tr>
<tr>
<td></td>
<td>catalogs for one or more selected lamps.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2. Properly select and install lamps into lighting fixtures.</td>
<td></td>
</tr>
</tbody>
</table>

continued
<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>3, 4</td>
<td>3. Install one or more of the following lighting fixtures and their associated lamps:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Surface-mounted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Recessed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Suspended</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Track-mounted</td>
<td></td>
</tr>
</tbody>
</table>
Craft: Electrical  
Module Number: 26204-11  
Module Title: Conduit Bending  

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,  
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<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>3, 5</td>
<td>1. Use an electric or hydraulic bender to bend a conduit stub-up to an exact distance of 15¼&quot; above the deck.</td>
<td></td>
</tr>
<tr>
<td>3, 5</td>
<td>2. Make an offset in a length of conduit to miss a 10&quot; high obstruction with a clearance between the obstruction and the conduit of not less than 1&quot; nor more than 1½&quot;.</td>
<td></td>
</tr>
<tr>
<td>3, 5</td>
<td>3. Make a saddle in a length of conduit to cross an 8&quot; pipe with 1&quot; clearance between the pipe and the conduit.</td>
<td></td>
</tr>
</tbody>
</table>
Objective | TASK | RATING
---|---|---
1 | 1. Identify various NEMA boxes. | 
2 | 2. Properly select, install, and support pull and junction boxes over 100 cubic inches in size. | 
5 | 3. Identify various conduit bodies and fittings. | 
Craft: Electrical
Module Number: 26206-11
Module Title: Conductor Installations

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 Training Report Form 200, and submit the results to the Training Program Sponsor.

Certified Plus Credential: Trainees who successfully complete these performance tasks may be
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Testing of this Performance Profile for eligibility requirements, or contact
NCCER for more information.

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2, 5</td>
<td>1. Prepare multiple conductors for pulling in a raceway system.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2. Prepare multiple conductors for pulling using a wire-pulling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>basket.</td>
<td></td>
</tr>
</tbody>
</table>
Craft: Electrical
Module Number: 26207-11
Module Title: Cable Tray

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 Training Report Form 200, and submit the results to the Training Program Sponsor.

Certified Plus Credential: Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 6</td>
<td>1. Prepare a list of materials for a cable tray layout. List all the components required, including the fasteners required to complete the system.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2. Join two straight, ladder-type cable tray sections together.</td>
<td></td>
</tr>
</tbody>
</table>
Craft: Electrical
Module Number: 26208-11
Module Title: Conductor Terminations and Splices

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 Training Report Form 200, and submit the results to the Training Program Sponsor.

Certified Plus Credential: Trainees who successfully complete these performance tasks may be
eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2, 3, 5</td>
<td>1. Terminate conductors using selected crimp-type and mechanical type terminals and connectors.</td>
<td></td>
</tr>
<tr>
<td>2, 3, 5</td>
<td>2. Terminate conductors on a terminal strip.</td>
<td></td>
</tr>
<tr>
<td>2, 3, 5</td>
<td>3. Insulate selected types of wire splices and/or install a motor connection kit.</td>
<td></td>
</tr>
</tbody>
</table>
Craft: Electrical

Module Number: 26209-11

Module Title: Grounding and Bonding

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>3, 6</td>
<td>1. Using the proper fittings, connect one end of a No. 4 AWG bare copper grounding wire to a length of ¾&quot; galvanized water pipe and the other end to the correct terminal in a main panelboard.</td>
<td>continued</td>
</tr>
</tbody>
</table>

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 Training Report Form 200, and submit the results to the Training Program Sponsor.

Certified Plus Credential:  
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<tr>
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<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>3, 6</td>
<td>2. Install two lengths of Type NM cable in a switch box using Type NM cable clamps:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Strip the ends of the cable to conform with NEC® requirements.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Secure the cable in the switch box and tighten the cable clamps.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Connect and secure the equipment grounding conductors according to NEC® requirements, and secure to the switch box with either a ground clip or a grounding screw.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>3. Size the minimum required grounding electrode conductor for a 200A service fed by 3/0 copper.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>4. Size the minimum required equipment grounding conductor in each conduit for a 400A feeder gap using two parallel runs of 3/0 copper.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>5. Size the minimum required bonding jumper for a copper water pipe near a separately derived system (transformer) where the secondary conductors are 500 kcmil copper.</td>
<td></td>
</tr>
</tbody>
</table>
Craft: Electrical
Module Number: 26210-11
Module Title: Circuit Breakers and Fuses

TRAINEE NAME: _____________________________________________________________

TRAINEE SOCIAL SECURITY NUMBER: __________________________________________

CLASS: ______________________________________________________________________

TRAINING PROGRAM SPONSOR: ________________________________________________
____________________________________________________________________________

INSTRUCTOR: _______________________________________________________________

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<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1. Identify the following on one or more circuit breaker(s) and fuse(s):</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Number of poles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Load rating</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Voltage rating</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Amperage interrupting rating</td>
</tr>
</tbody>
</table>
Craft: Electrical
Module Number: 26211-11
Module Title: Control Systems and Fundamental Concepts

TRAIINEE NAME: _____________________________________________________________

TRAIINEE 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 Training Report Form
200, and submit the results to the Training Program Sponsor.

Certified Plus Credential: Trainees who successfully complete these performance tasks may be
eligible for a Certified Plus Credential. Refer to the Note on Performance
Testing of this Performance Profile for eligibility requirements, or contact
NCCER for more information.

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>5, 9</td>
<td>1. Mount and connect a 120V lighting contactor with a three-wire pushbutton control.</td>
<td></td>
</tr>
</tbody>
</table>
NOTE ON PERFORMANCE TESTING

Performance Profile Sheet(s) are included in a format that can be easily photocopied for each trainee. This examination is 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 NCCER Standardized Craft Training Program, the following conditions must be met:

1. The Craft Instructor must hold valid NCCER instructor certification.
2. The training must be delivered through an 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 Training Report Form 200. This form must be provided to the local Accredited Training Sponsor to be forwarded to the NCCER National Registry.

Certified Plus Credential

Provided the sponsor is working through an NCCER-Accredited Assessment Center, candidates who successfully pass performance testing may be eligible for a Certified Plus Credential. A number of NCCER's Performance Profiles cross over to NCCER's Assessment Performance Verifications and may be completed simultaneously. Go to www.nccer.org and select the Assessments tab to locate the Performance Verifications associated with this craft. Note that two other important conditions are required for the Certified Plus Credential:

1. Candidates must first pass the associated written assessment.
2. An NCCER-Accredited Assessment Administrator must sign off on the Performance Verification before it is submitted to NCCER.
Module 26301-11 has no Performance Profile Sheet; no performance testing is required for this module.
Module 26302-11 has no Performance Profile Sheet; no performance testing is required for this module.
**Performance Profile Sheet (Page 1 of 2)**

**Craft:** Electrical  
**Module Number:** 26303-11  
**Module Title:** Practical Applications of Lighting

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1. Using manufacturers’ catalogs, select the appropriate lighting fixtures for specific lighting situations.</td>
<td>continued</td>
</tr>
</tbody>
</table>

**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 Training Report Form 200, and submit the results to the Training Program Sponsor.

**Certified Plus Credential:**  
Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.
<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-5</td>
<td>2. While touring selected structures to observe their lighting systems:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Identify the various types of lighting fixtures used.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Explain the specific purpose(s) served by the different fixtures.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Identify the lighting system class of service.</td>
<td></td>
</tr>
</tbody>
</table>
**Objective** | **TASK** | **RATING**
--- | --- | ---
2-5 | 1. Using two rigid metal conduit nipples, a sealing fitting, three pieces of No. 12 THHN conductors, and a packing fiber/sealing kit, perform the following operations: | continued

- Secure one conduit nipple in each end of the seal.
- Make sure the required amount of threads are engaged.
<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Pull the three THHN conductors through the nipples and seal so that about 6” is protruding from each nipple.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Pack the fiber as per the instructions furnished with the sealing kit.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Mix the sealing compound.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Position the unit in the required location and pour in the sealing compound.</td>
<td></td>
</tr>
</tbody>
</table>
Module 26305-11 has no Performance Profile Sheet; no performance testing is required for this module.
Module 26306-11 has no Performance Profile Sheet; no performance testing is required for this module.
Module 26307-11 has no Performance Profile Sheet; no performance testing is required for this module.
Module 26308-11 has no Performance Profile Sheet; no performance testing is required for this module.
Module 26309-11 has no Performance Profile Sheet; no performance testing is required for this module.
Module 26310-11 has no Performance Profile Sheet; no performance testing is required for this module.
Craft: Electrical
Module Number: 26311-11
Module Title: Motor Controls

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 Training Report Form 200, and submit the results to the Training Program Sponsor.

Certified Plus Credential:  Trainees who successfully complete these performance tasks may be
eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact
NCCER for more information.

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1. Make all connections for a magnetic motor controller, controlled by two pushbutton stations, including the connections for holding the circuit interlock.</td>
<td></td>
</tr>
</tbody>
</table>
NOTE ON PERFORMANCE TESTING

Performance Profile Sheet(s) are included in a format that can be easily photocopied for each trainee. This examination is 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:

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- 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

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1. The Craft Instructor must hold valid NCCER instructor certification.
2. The training must be delivered through an 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 Training Report Form 200. This form must be provided to the local Accredited Training Sponsor to be forwarded to the NCCER National Registry.

Certified Plus Credential

Provided the sponsor is working through an NCCER-Accredited Assessment Center, candidates who successfully pass performance testing may be eligible for a Certified Plus Credential. A number of NCCER's Performance Profiles cross over to NCCER's Assessment Performance Verifications and may be completed simultaneously. Go to www.nccer.org and select the Assessments tab to locate the Performance Verifications associated with this craft. Note that two other important conditions are required for the Certified Plus Credential:

1. Candidates must first pass the associated written assessment.
2. An NCCER-Accredited Assessment Administrator must sign off on the Performance Verification before it is submitted to NCCER.
Module 26401-11 has no Performance Profile Sheet; no performance testing is required for this module.
Module 26402-11 has no Performance Profile Sheet; no performance testing is required for this module.
Module 26403-11 has no Performance Profile Sheet; no performance testing is required for this module.
PERFORMANCE PROFILE SHEET

Craft: Electrical
Module Number: 26404-11
Module Title: Basic Electronic Theory

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 Training Report Form 200, and submit the results to the Training Program Sponsor.

Certified Plus Credential: Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1. Test a transistor to determine whether it is an NPN or PNP.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>2. Identify the cathode on three different styles of SCRs, using the shape or markings for identification.</td>
<td></td>
</tr>
</tbody>
</table>
**Performance Profile Sheet**

**Craft:** Electrical  
**Module Number:** 26405-11  
**Module Title:** Fire Alarm Systems

---

**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 Training Report Form 200, and submit the results to the Training Program Sponsor.

**Certified Plus Credential:**  

Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

---

<table>
<thead>
<tr>
<th>Objective</th>
<th>Task</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1. Connect selected fire alarm system(s).</td>
<td></td>
</tr>
</tbody>
</table>

---

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### Craft: Electrical

**Module Number:** 26406-11

**Module Title:** Specialty Transformers

---

**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 Training Report Form 200, and submit the results to the Training Program Sponsor.

**Certified Plus Credential:**

Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

---

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1. Identify various specialty transformers.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2. Using a clamp-on ammeter, demonstrate the principles of a current transformer. Identify the primary winding, then calculate and measure the effects of increasing the number of turns (loops) in the primary winding.</td>
<td></td>
</tr>
</tbody>
</table>
Craft: Electrical
Module Number: 26406-11
Module Title: Specialty Transformers

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3. Connect a buck-and-boost transformer to a single-phase circuit so that it will first be in the boost mode, and then in the buck mode. Record the voltage increase and decrease for each configuration.</td>
<td></td>
</tr>
</tbody>
</table>
Craft: Electrical
Module Number: 26407-11
Module Title: Advanced Controls

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 Training Report Form
200, and submit the results to the Training Program Sponsor.

Certified Plus Credential: Trainees who successfully complete these performance tasks may be
eligible for a Certified Plus Credential. Refer to the Note on Performance
Testing of this Performance Profile for eligibility requirements, or contact
NCCER for more information.

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2, 3</td>
<td>1. Identify and connect various control devices.</td>
<td></td>
</tr>
</tbody>
</table>
# PERFORMANCE PROFILE SHEET

Craft: Electrical

Module Number: 26408-11

Module Title: HVAC Controls

## 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 Training Report Form 200, and submit the results to the Training Program Sponsor.

### Certified Plus Credential:

Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1. Identify various types of thermostats and explain their operation and uses.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2. Install a conventional 24V bimetal thermostat and hook it up using the standard coding system for thermostat wiring.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3. Check and adjust a thermostat, including the heat anticipator setting and indicator adjustment.</td>
<td></td>
</tr>
</tbody>
</table>

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# PERFORMANCE PROFILE SHEET

**Craft:** Electrical  
**Module Number:** 26409-11  
**Module Title:** Heat Tracing and Freeze Protection

---

**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 Training Report Form 200, and submit the results to the Training Program Sponsor.

**Certified Plus Credential:**

Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1. Prepare and connect heat tracing cable in a power connection box or splice box.</td>
<td></td>
</tr>
</tbody>
</table>
Module 26410-11 has no Performance Profile Sheet; no performance testing is required for this module.
## PERFORMANCE PROFILE SHEET

### Craft: Electrical

**Module Number: 26411-11**

**Module Title: Medium-Voltage Terminations/Splices**

**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 Training Report Form 200, and submit the results to the Training Program Sponsor.

**Certified Plus Credential:**

Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

<table>
<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2, 3</td>
<td>1. Prepare a cable and complete a splice or stress cone.</td>
<td></td>
</tr>
</tbody>
</table>
Module 26412-11 has no Performance Profile Sheet; no performance testing is required for this module.
Craft: Electrical
Module Number: 46101-11
Module Title: Fundamentals of Crew Leadership

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 Training Report Form 200,
and submit the results to the Training Program Sponsor.

Certified Plus Credential: Trainees who successfully complete these performance tasks
may be eligible for a Certified Plus Credential. Refer to the Note on Performance
Testing of this Performance Profile for eligibility requirements, or contact
NCCER for more information.

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<thead>
<tr>
<th>Objective</th>
<th>TASK</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>1. Develop an estimate for a given work activity.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>2. Develop and present a look-ahead schedule.</td>
<td></td>
</tr>
</tbody>
</table>