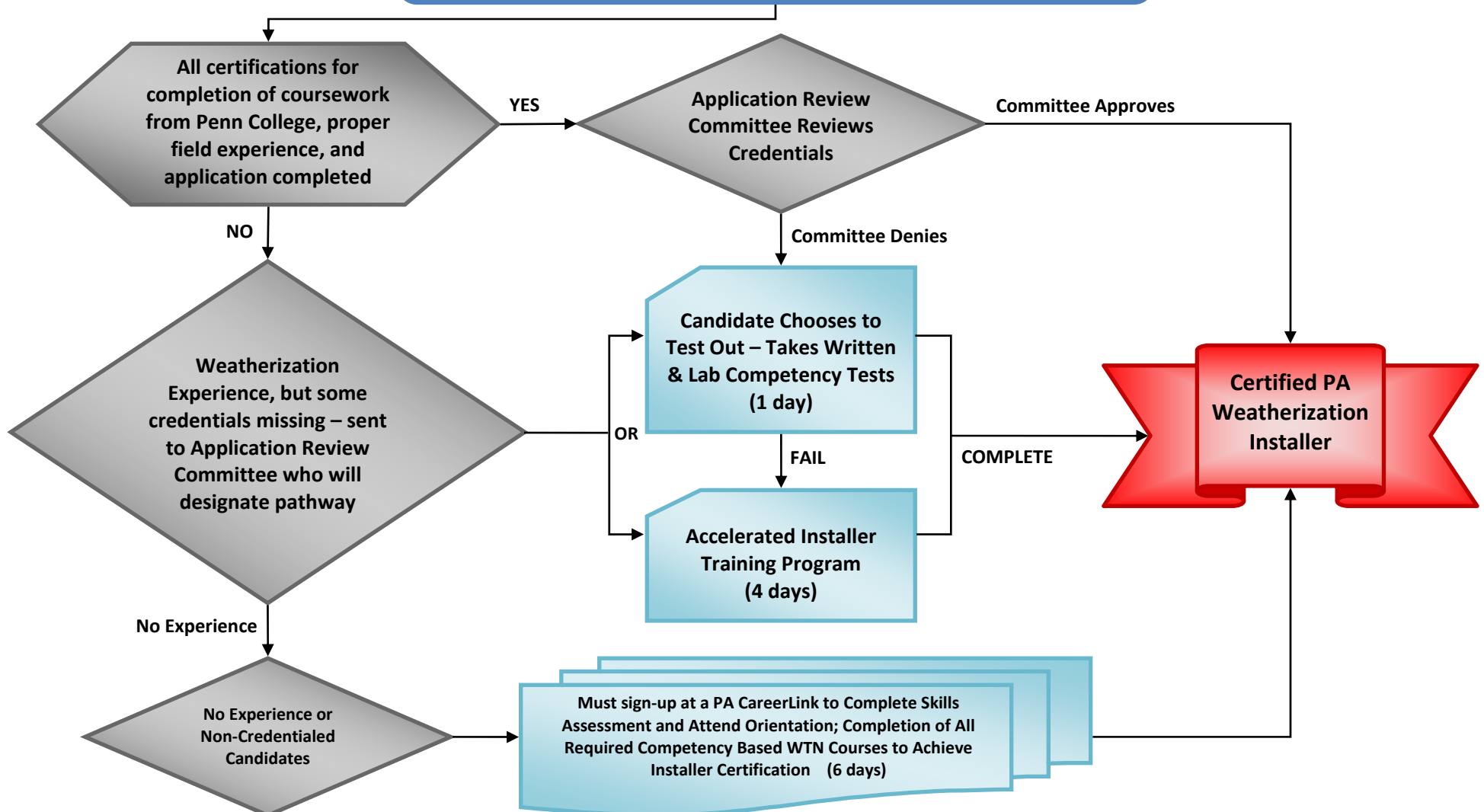


The Pennsylvania Department of Labor & Industry, in cooperation with the Pennsylvania Department of Community and Economic Development and Penn College, has developed this process for providing Weatherization Certifications to individuals interested in become certified Weatherization Installers. In the future, this certification may be applicable for certification in other programs and/or initiatives.

In order to become certified as a Weatherization Installer, you must fulfill certain qualifications (please see the attached application form, as well as Labor and Industry Training Forms D and E). As the outline below indicated, applicants may be approved as Weatherization Installers by following one of three pathways.

Weatherization Installer Certification



Pennsylvania Labor & Industry Weatherization Training Form E

Coursework for Weatherization Workers: Installers

Applicant Name _____

Completion of the following courses is required to become a Weatherization Installer. Please check the following courses for which you hold a certificate of completion from Penn College Weatherization Training Center. If possible, proof of completion should be attached to your completed application:

Coursework:	Date Taken	WTC Verified
<input type="checkbox"/> WTC Tactics	_____	_____
<input type="checkbox"/> Lead Safe	_____	_____
<input type="checkbox"/> Crew Safety	_____	_____

Field experience is necessary to receive a certification immediately. Please have your employer verify the below field work experience.

Field Work Experience/Verification:	Years of Experience	Agency Verified
<input type="checkbox"/> Air Sealing	_____	_____
<input type="checkbox"/> Duct Sealing	_____	_____
<input type="checkbox"/> Insulation	_____	_____
<input type="checkbox"/> Base load Measures	_____	_____
<input type="checkbox"/> Blower Door/Zone Pressure Diagnostics	_____	_____

If agency verifying field work experience is different than the employer listed on page one of the Weatherization Worker Certification Application, please list the verifying agency's information below, and include the name of a contact person:

Applicant Name _____

Please list any other relevant Weatherization courses completed at Penn College or other institutions. Please specify who provided the training and the dates taken. If possible, proof of completion should be attached to your completed application:





Test Out Option

Weatherization Installer

What it is:

Prospective candidates may qualify to “test out” of their appropriate certification requirements through a combination of both written and hands-on testing.

Installer Level Testing:

1. Written Exam (2 hours maximum): consisting of 100 questions from Weatherization Installer courses (see Labor & Industry Weatherization Training Form E)
2. Hands-on Test (2 hours maximum):
 - a. Demonstration of tool and safe workplace practices
 - b. Construct access door from provided plans
 - c. Glass replacement
 - d. Dense pack cellulose

Where:

- i. Weatherization Training Center at Pennsylvania College of Technology (WTC/PCT), Williamsport, PA
- ii. Department of Labor and Industry approved training providers – list to be available after August 25, 2009

When:

- Weatherization Training Center: beginning the week of September 21, 2009
- Department of Labor and Industry approved training providers: to be announced



Accelerated Installer Certification Course Content Outline

Course Goal

An Installer is a crew member or contractor that installs weatherization measures in eligible dwellings according to Pennsylvania Weatherization Assistance Provider (PA WAP) standards and guidelines. Reference for installers will be the *Weatherization Standards and Field Guide for Pennsylvania* by the PA Department of Community and Economic Development and the PAWAP.

This course will prepare current PAWAP contractors, private contractors and tradespersons to gain Commonwealth certification as a Weatherization Installer thus enabling them to participate with the Weatherization workforce in their region. Pre-qualified candidates for this course will be required to demonstrate, through written and hands-on assessments during the training, the knowledge, understanding, and physical application of the minimum core competencies of the Installer certification standards as determined by the Commonwealth.

Course Objectives

Upon successful completion of this course, Installer candidates will be able to:

- Present and/or demonstrate proficiency in Weatherization Basic Competencies
 - Understand and maintain Safe Work Practices
 - Integrate into the Weatherization workforce with an understanding of PA Weatherization program standards as Certified Weatherization Installers
 - Meet PA Weatherization Installer Certification Requirements
-

Course Areas of Concentration

The following areas of concentration are presented in this course:

- Weatherization Tactics
 - Lead Safe Work Practices
 - Crew Safety
 - PA WAP Standards
-

Primary Audience

Potential Candidates include:

- Weatherization Training Center & WAP Agency Personnel who have not completed all the necessary course requirements for Installer Certification

- Private Contractors Pre-qualified by the Weatherization Application Process who wish to enter the Weatherization Workforce or Participate in the WAP Program in PA
 - Any other Installer Candidates identified by the Commonwealth
-

Course Materials The following reference materials are provided to candidates during this course:

- *Weatherization Standards and Field Guide for Pennsylvania* by the PA DCED and the PAWAP
 - *Residential Energy* by John Krigger and Chris Dorsi
-

Format Using a combination of classroom lecture and discussion, audio-visual presentations, and practical hands-on lab exercises, candidates will be introduced to the weatherization side of construction, building science and building assessment. Each module of instruction will include part or all of these methods of technology transfer to acclimate the auditor candidates to the demands and expectations of the weatherization programs.

In addition to the familiarization process, the Installer course structure also serves as a stepping off platform into the world of weatherization. For example, trade contractors not familiar with weatherization programs may have experience installing insulation, air sealing buildings, and/or addressing moisture problems, but weatherization focuses on assessment and permanent remediation of such challenges so the end user will benefit from a more energy efficient, safer, and healthier home. In addition, weatherization installers need to have a clear understanding of how buildings perform as a system in order to accurately assess and remediate existing structures rather than new construction.

Day 1: (8) hour combination of lecture, discussion, and hands on training in Weatherization Tactics Part 1 (emphasis on building science through lecture & discussion)

Day 2: (8) hour combination of lecture, discussion, and hands on training in Weatherization Tactics Part 2 (emphasis moves to more hands on assessments and remediation)

Day 3: (4) hour combination of lecture, discussion, and hands on training in Lead Safe Work Practices and (4) hour Crew Safety (emphasis on safety through lecture and discussion with some hands on)

Day 4: (4) hour review of PAWAP standards and Installer competencies referencing the Field Guide; (4) hours allotted for written and practical test for certification

Installer Certification Accelerated Course Content Outline

Day 1 Weatherization Tactics (8 hours)

Overview The first module of this program focuses on addressing basic weatherization and building science knowledge and application. The information moves from a classroom based delivery to the hands-on lab focused application so that participants can be assessed in their comfort level of weatherization tactics from the weatherization versus traditional construction trades point of view. PA WAP standards are emphasized through all Weatherization courses where they apply; tactics begins that process and is geared towards developing a comfort level in the participants so that they can work in their respective programs under a common standard and established core competencies.

DAY 1

Objectives

Upon completion of the module, participants will be able to:

- Demonstrate a basic knowledge of Weatherization Principles and Building Science Theory
 - Identify the different types of basic construction, potential air leakage, and areas requiring new or additional insulation required for effective energy retrofits
 - Comply with PA WAP standards through demonstration of ability to effectively air seal and insulate buildings
-

Agenda

Day 1

8:30 am	INTRODUCTION
8:45 am	PRE-TEST
9:15 am	WEATHERIZATION PRINCIPLES AND THEORY: 1) Goals of WX program 2) Priorities 3) Heat movement
10:30 am	BUILDING COMPONENTS 1) Balloon 2) Platform 3) Brick 4) Knee wall
	LAB EXERCISE 1) Building components identification
Noon	BREAK FOR LUNCH

- 12:30 pm IDENTIFYING AIR LOSS
- 1) Blower door components
 - 2) What causes air leakage
 - 3) Air Barrier/Thermal Barrier

AIR SEALING/WEATHERSTRIPPING MATERIALS & TECHNIQUES

- 1) Video
- 2) Lab/Hands On
 - a. Knee wall
 - b. Basement Band Joist
 - c. Thresholds
 - d. Door Sweeps
 - e. Caulking

2:00 pm INSULATION MATERIALS & TECHNIQUES

- 1) Materials
 - a. R-Values
 - b. Types
 - c. Uses
- 2) Attics
 - a. Baffles
 - b. Dams
 - c. Electrical
- 3) Floors
 - a. Fiberglass batt
 - b. Loose blown
 - c. Dense pack
 - d. Loose fill coverage chart
- 4) Lab/Hands On
 - a. Insulate hot water tanks & pipes
 - b. Demo different types of insulation techniques/materials
- 5) Review PA WAP Priority List for Air Seal and Insulation

5:00 pm Q&A – WRAP UP DAY 1

DAY 2 TACTICS, Part 2 (8 hours)

Overview The second day addresses the remainder of Tactics with focus on HVAC Ducting, Ventilation, Moisture, Building Cavities, and Assessment and Remediation.

Objectives Upon completion of this module, participants will be able to:

- Demonstrate the ability to assess and remediate issues pertaining to HVAC Ducts

- Identify and remediate basic types of ventilation and moisture control issues found in existing buildings and have a basic understanding of calculating minimum ventilation guidelines
- Work with attic spaces to determine proper ventilation and installation requirements
- Work with accessing building cavities to include drywall patching, building and installing access doors
- Demonstrate the ability to replace glass in windows and doors according to PA WAP standards

Agenda
Day 2

- 8:00 am HVAC DUCTS
- 1) Supply and Return Ducts
 - 2) Vented crawl spaces
 - 3) Attics
 - 4) Basements
 - 5) Video – DEMO
- 9:00 am LAB / DEMO
- 1) Duct sealing supply and returns
 - 2) Proper use of insulation machine
 - a) wall cavity
 - b) dense pack floored attic
- 12 Noon BREAK FOR LUNCH
- 12:30 pm VENTILATION & MOISTURE CONTROL
- 1) Moisture Movement
 - 2) Identifying moisture problems
 - 3) Vapor Barriers
 - 4) Crawl Spaces & Attics
- CALCULATING MINIMUM VENTILATION GUIDELINES
- 2:00 pm ATTICS
- 1) How vents work
 - 2) Types
 - 3) Sizes
 - 4) Calculating attic ventilation needs
 - 5) Calculating net free vent areas
 - 6) Lab/Hands On
 - a) Installing a gable window vent
 - b) Installing roof vents
- 3:00 pm ACCESSING BUILDING CAVITIES (LAB)
- 1) Construct & Install Access Door
 - 2) Install & patch dry wall

- 4:00 pm WORKMANSHIP
- 1) Video – “Who Filled the Dishwasher?”
 - 2) Glass replacement
 - 3) Lab/Hands On - Glazing Exercise
- 5:00 pm Q&A – WRAP UP DAY 2
-

DAY 3 LEAD SAFE WORK PRACTICES & CREW SAFETY (8 hours)

Overview The third module focuses on Lead Safe Work Practices and Crew Safety according to PA WAP standards and competencies.

- Objectives** Upon completion of this module, participants will be able to:
- Identify materials in existing buildings that could become potential lead hazards
 - Be familiar with ventilation and indoor air quality issues and how they apply to safety on the job
 - Indicate potential hazards and recommend remediation through action and materials in documentation
 - Incorporate proper safety practices into everyday processes and tasks
 - Recognize potential safety hazards to self and fellow crew members and take proactive action to remediate
 - Recognize, measure and monitor for proper CO levels
 - Identify different types of insulation and demonstrate proficiency in operation of insulation blowing machinery
-

Agenda

- Day 3 8:30 am LEAD SAFE WORK PRACTICES
- 1) Video: “Moving Toward A Lead-Safe America”
 - 2) Why should I be concerned about Lead-Contaminated Dust?
 - 3) Talking to Clients & Planning Work
 - 4) Set-up Your Work Space to Contain Lead-Dust
 - 5) Clean-up and Check Your Work
- 12 Noon BREAK FOR LUNCH
- 12:30 pm CREW SAFETY
- 1) OSHA Construction Regulations
 - 2) Common Construction Hazards
 - 3) Common OSHA Violations
 - 4) Training Requirements
 - 5) Maintenance and Cleaning

- 2:00 pm PPE (Personal Protective Equipment)
1) Eye and Hearing Protection
2) Tool and Electrical Safety
- 2:30 pm LADDER SAFETY
1) Classification
2) Inspection
- 3:00 pm FALL PROTECTION
1) What is Fall Protection?
2) Types and applications
- 4:00 pm RESPIRATORS
1) Types & uses
2) Medical evaluation
3) Replacement cartridges
4) Fit testing
5) Cleaning & maintenance
- 5:00 pm Q & A – WRAP UP DAY 3

DAY 4

PA WAP STANDARDS and PRIORITIZATON LIST (4 hours); INSTALLER CERTIFCATION REVIEW & EXAM (4 hours)

Overview

The fourth module focuses on review and understanding of the PA WAP standards. Complete familiarity of the *Weatherization Standards and Field Guide for Pennsylvania* by the PA DCED and the PAWAP will be emphasized. Participants will spend time in the lab reviewing correct application of tactics and assessment according to the Measure Selection Priority List for the PA Weatherization standard. Review for and the actual written exam for Installer Certification will conclude the day and overall training.

Objectives

Upon completion of this module, participants will be able to:

- Identify and demonstrate proficiency in the core competencies of the Installer Certification program
 - Demonstrate proper employment of Weatherization tactics as defined in the PA WAP standards and Field Guide
 - Display ability to use and reference the *Weatherization Standards and Field Guide for Pennsylvania* in an assessment and remediation scenario
 - Take the written certification exam for Weatherization Installer
-

Agenda

Day 4

- 8:30 am REVIEW OF PA WAP STANDARDS & CORE COMPETENCIES
- 1) Using the Field Guide
 - 2) Understanding the PA Measure Selection Priority List
 - 3) Review of core competencies for Installer Certification
 - 4) Discussion of Pre-test results
 - 5) LAB / HANDS ON – Competency Review
- 12 Noon BREAK FOR LUNCH
- 1:00 pm Q & A Review
- 2:00 pm INSTALLER CERTIFICATION WRITTEN EXAM
- 4:30 pm WRAP-UP