

## Indiana Home Energy Conservation Building Shell Contractor Training

20 Hours of Specialized Technical Training

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**Course No:** Wx103

**Pre-requisites:** N/A

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**Office Hours:** TBD  
**Office Location:** TBD

**Class Hours:** This course is taught as a block of instructions and meets 20 hours over a three day period.

**Class Schedule:** 1<sup>st</sup> day TBD  
2<sup>nd</sup> day TBD  
3<sup>rd</sup> day TBD

### Course Description:

This course studies principles of air sealing and insulating a building pursuant to the Indiana Field Guide. Students/Contractors will learn details about vapor and thermal boundaries, major vs. minor air sealing, determine MVR, attic air sealing, kneewall air sealing, basement and crawl space air sealing, ground vapor barriers, duct sealing, and blower door directed air sealing. Also, the students/contractors will learn details about attic insulation, rafter ceiling insulation, kneewall insulation, wall insulation, basement and crawl space insulation, and duct insulation. Most importantly, the students will learn health and safety issues, daily safety test-out procedures, and other problems routinely found by field monitors.

This course is designed for individuals who possess a background in energy efficiency, or HVAC, or residential construction, and have an interest in contract work with the State of Indiana Home Energy Conservation Program. This course is available both online and in-classroom; however, twenty (20) hours of in-class training is mandatory which can be completed in 2½ days at various locations throughout the state.

### Resources:

Anyone who works in the maintenance field: e.g.: technicians, supervisors, managers, directors, property managers, and instructors.

**Supplies:** N/A

### Curriculum:

This curriculum consists of:

- Instructions and Reading assignments.
- Classroom lectures and watching presentations over the internet.
- Air sealing and insulating demonstrations.
- Analyzing Wx work order forms.
- Skill assessments (practice simulations of Wx work activities)
- Reference materials and/or website links

**Key Learning's:**

The students will learn Wx work activities, the Indiana Wx Field Guide, and contract opportunities available through the ARRA program.

**Course Objectives/Goals:**

Upon successful completion of this course, students will be able to participate in the State of Indiana Weatherization program, establish a contract with an ARRA administrator, and/or seek employment through an ARRA administrator or approved contractor.

**Intermediate Objectives:**

Students/Contractors will be able to:

1. Understand the role of a Wx worker.
2. Describe Wx work assignments.
3. Conduct a health and safety evaluation of the home.
4. Establish MVR, air seal the attic and walls, and perform blower door directed air sealing.
5. Air seal the basement and crawl space, establish a ground vapor barrier, and seal HVAC ducts.
6. Align Vapor and Thermal Boundaries, pressure balance rooms, and zonal pressure diagnostics.
7. Insulate attics, sidewalls, rafter ceilings, kneewalls, basements, and craw spaces.
8. Air seal and insulate mobile homes.
9. Perform a daily safety test-out (DSTO) after completing all relevant work.
10. Educate clients about the Wx work activities; and provide client behavior tips that will further reduce their energy consumption and utility bills.
11. Consider likely consequences if the work is neglected or not completed properly; and use good judgment and report problems to the auditor and/or program administrators.
12. Complete Wx assignments pursuant to the Indiana Field Guide, and, within the auditor's objectives.

**Grading and Testing Policy:**

Classroom attendance is mandatory and will be recorded as part of student performance. An attendance record of completing 16 hours of training is required to earn the contractor status.

**Attendance Values:    Maximum Possible Points -100**

- No Absences        = 100 points
- One day             = 90 points
- Two days            = 50 points
- Three days         = 25 points
- Four days 20%    = 0 points

**Note:**

- Three (3) times tardy and/or leaving will equal one (1) absence
- Tardy is, coming into classroom or lab area after roll call

**Attendance Policy:**

Regular class attendance is critical to a student's success. Students must be present in order to participate in the learning experiences that occur in the classroom and lab. Erratic attendance will make it impossible for the instructor to be of value to the student in meeting the objectives of the course. Make up opportunities will be at the discretion of the instructor. Consequently, the student with a combination of tardiness and absenteeism totaling 20% of course time must retake the course.

This program attempts to develop positive work ethics; therefore, students must call in or inform the instructor anytime he/she will be absent.

**Written Test Values:** N/A

**Job Sheets:**

(Disassembly and reassembly of practice components)

- For each completed job sheet, the student will receive five (5) points.

**Repair Orders:**

(Practice simulations without customer relations)

- For each correctly diagnosed practice simulation, the student will earn five (5) points

**Special Projects:**

Points will be determined when the projects are assigned.

**Skill Assessment Values:**

(Practice simulations with customer relations)

Maximum: 400 points per simulation.      The student is accountable for the following skill areas.

- |                           |                 |     |
|---------------------------|-----------------|-----|
| • Health & Safety Skills  | Possible points | N/A |
| • HVAC Technical Skills   | Possible points | N/A |
| • Air Sealing Skills      | Possible points | N/A |
| • Insulation Skills       | Possible points | N/A |
| • Client Education Skills | Possible points | N/A |
| • Documentation Skill     | Possible points | N/A |

**Final Course Grade:**

The student’s overall performance will be determined by results from the examination, interviews, documentation skill, and OJT assignments.

As the minimum passing range, students are required to demonstrate a proficiency in 70% of the course activities, which amounts to earning 280 points.

Grading Criteria		
Examination	0 pts	25%
Interview	0 pts	25%
Documentation Skill	0 pts	25%
OJT Assignments	0 pts	25%
Total	0 pts	100%

**Make Up Work:**

No make up work is allowed unless by prior approval by instructor. The instructor may assign additional outside work to be completed for each absence.

**Lab Safety:**

Safety glasses will be worn at all times while in the lab or when doing maintenance work.

**Academic Dishonesty Statement:**

Academic dishonesty, including plagiarism and cheating will result in the loss of credit for the assignment and/or course.

**Student Disabilities:**

If a student has a disability, which may affect their learning in the classroom, the instructor should be notified as soon as possible. The school will provide reasonable accommodations to remove all barriers that prevent learning. Disabled students requesting academic assistance may be requested to provide documentation of the disability and extent of support services necessary.

**Classroom Etiquette:**

AC/C TECH will maintain an appropriate and harassment free classroom.

- Any harassment, inappropriate behavior, screen savers, web sites will not be tolerated.
- Bring your Wx Field Guide, notebook, calculator, and pen or pencil to class everyday.
- While in this class, concentrate on the subject at hand and not on unrelated web sites.
- You are expected to take an active role in class discussions, exercises, peer responses, and group activities.
- Excessive talking with another student will not be tolerated, especially during lectures.
- No food allowed or headphones are allowed.
- Turn-off cell phones or switch them to vibrate during class hours.
- Students should be familiar with the school's policies on attendance, harassment, and cheating as posted on the website or handout.

All material in this course outline is subject to change.