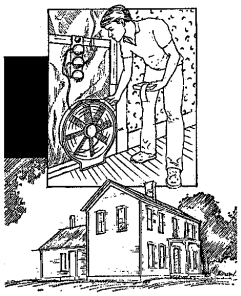

Weatherization Inspector/Auditor Training

Comprehensive Weatherization Energy Inspector/Auditor Training

This course prepares the weatherization professional to conduct a comprehensive inspection and diagnostic analysis of a house using state-of-the-art diagnostic tools. The complete weatherization inspection includes a comprehensive evaluation and documentation of the building shell, assessment of the efficiency and safety of the mechanical systems and a recording of lights, appliances and other components of the home's base load energy use. This course provides a sound knowledge of building science principles, basic blower door air leakage testing and combustion appliance inspection procedures.

This is an intensive, two-week training course that can be taken in modules:

- Module One: Basic Auditor, five days
- Module Two: Inspecting Combustion Heating Systems, two days
- Module Three: Inspecting Mobile Homes, two days
- Module Four: REM Audit Software, one day

Modules one and two can be taken for Building Performance Institute (BPI) certification as a Building Analyst, Shell Specialist, and Heating Specialist. Please visit our website at www.KansasBuildingScience.com for more information. Additional fees apply for BPI exams.

Who should attend

This training is designed for weatherization inspectors, auditors, technicians and crew workers. Weatherization directors may also find it useful in order to better understand the technical aspects of the weatherization process. Utility auditors may attend this course or KBSI's energy rater course to learn auditing skills.

Your instructors

- **Doug Walter** is president of KBSI. He has taught building energy principles for more than 25 years. He is a technical consultant for the Kansas Weatherization Assistance Program and the Energy Division of the Kansas Corporation Commission.
- **Rob DuTeau** is KBSI's director of training. He is a mechanical engineer with a master's degree in petroleum engineering/geothermal. Before joining KBSI he taught mathematics at Friends University.
- **Tom Mahoney** is KBSI's Rating Services Director. He has a degree in Mechanical Engineering and an Associate Degree in Solar Engineering Technology.
- **Tom Chavey** is a trainer for KBSI. He has been involved in housing programs for twenty years as a contractor, inspector and trainer. He is a certified Home Energy Rater, Kansas Weatherization Inspector, and Housing Quality Standards Inspector.

Module Agendas

Basic Auditor Training: Week 1 – Day 1

- Introduction to the weatherization process
- History of weatherization and WeatherizationPLUS
- Building science principles
- Heat, air and moisture flows
- Video: Whole-House Weatherization
- Telltale House demonstration
- Building shell heat flow
- Climate & other factors that affect energy use

Basic Auditor Training: Week 1 – Day 2

- Building construction and energy flaws
- Defining and aligning the thermal and pressure boundaries
- Insulation
- Windows and doors
- Air leakage
- Using a blower door to measure air flow and locate air leaks
- Basic pressure diagnostics
- Hands-on blower door practice
- Duct Blaster™ demonstration

Basic Auditor Training: Week 1 – Day 3

- Residential heating systems
- Video: Residential Gas Heating Systems
- Confined spaces and combustion air
- Water heating
- Summer comfort principles
- Lights and appliances
- Mechanical ventilation

Basic Auditor Training: Week 1 -- Day 4

- Calculating areas and volumes
- Field data collection forms, procedures, tips and tools
- Measuring and documenting a house (hands-on)
- Data take-offs from field data collection forms
- Selecting weatherization measures
- Additional blower door and duct blaster testing

Basic Auditor Training: Week 1 – Day 5

- Weatherization health and safety
- Mold and weatherization
- Review
- Exam (course adjourns at 3:30 pm)

Inspecting Combustion Systems: Week 2 – Day 1

- Heating system components and their functions
- Furnace efficiency and safety
- Incomplete combustion and CO
- Diagnostic tools and their functions
- Lab demonstration of heating cycle and step-by-step inspection protocol

Inspecting Combustion Systems: Week 2 – Day 2

- Heat exchanger test procedures
- Testing mid- and high-efficiency furnaces
- Testing mobile home furnaces
- Testing water heaters
- Worst-case depressurization of combustion appliance zone
- Exam

Inspecting Mobile Homes: Week 2 – Day 3

- History of mobile homes
- Mobile home construction
- Identifying energy problems
- Roof and wall insulation techniques and materials
- Belly sealing and insulation
- Windows and doors
- Mobile home furnaces

Inspecting Mobile Homes: Week 2 – Day 4

- Auditing a mobile home
- Measuring mobile home air and duct leakage
- Selecting measures and writing work orders
- Exam

REM/Design Software: Week 2 – Day 5

* Overview of REM
* Introduction to data entry screens
* Working with REM's library system
* Sample problem #1: entering a simple house from plans
* Sample problem #2: entering a mobile home
* Improvement analysis (course adjourns at 4:00 pm)
  (Students participating in the software training must provide their own laptop computer)

All training sessions are conducted at the KBSI Training Center, 200 Zeandale Rd., Manhattan, Kansas. Sessions begin daily at 8:00 a.m.

Participants arriving by air should fly to Kansas City International, then travel to Manhattan via ground shuttle or rental car. Manhattan is two hours west of Kansas City on I-70. For further travel and lodging information, click on "Links" at KBSI's web site listed below or call our toll-free number.

Lunch and refreshments are included in your registration. Dress is casual.

What you will receive

- Weatherization Inspector Manual incorporating *Residential Energy,* 4th Edition, by John Krigger and Chris Dorsi.
- Combustion Heating System Inspection and Diagnostics Manual, including Readiness Checklist and inspection forms.
- *Your Mobile Home*, 5th Edition, by John Krigger.
- 7.5 percent discount on Minneapolis Blower Door equipment purchased from The Energy Conservatory.

Certification requirements (optional)

Each module will conclude with an open-book exam. Students who score at least 80 percent will receive a certificate of completion for that module. BPI exams may be substituted. Additional fees apply.

Registration

Attendance is limited, so please register early. There is a $150 per student cancellation fee. No refund is granted if cancellation notice is received less than seven days prior to the start of the training.

For more information about the workshop or to register by phone, please call, toll-free:

877-537-2425

Registration Form – Weatherization Inspector/Auditor Training

Only one registration per form. For additional registrations, please copy this form.

Name Job Title

Company/Agency

Address

City State Zip

Work Phone Work Fax

Cell Phone (for last-minute or emergency contact only)

e-mail address

Register by returning this form to:

Kansas Building Science Institute
PO Box 1264
Manhattan, KS 66505-1264

Or fax to: **866-220-3704**

BPI exams may be requested in lieu of or in addition to the KBSI course exams. BPI exams must be requested at least two weeks prior to the start of the training. Students wishing to take BPI exams must bring a laptop computer enabled for wireless internet access.

Check exam(s) requested below:

√	BPI Exam Registration	Fee
	Analyst Professional	$150
	Envelope Specialist	$150
	Heating Specialist	$150

Please indicate choice of 2011 session(s):

√	Dates	Module	Fee
	July 18-22	Basic Auditor	$1,150
	July 25-26	Combustion Systems	$ 395
	July 27-28	Mobile Homes	$ 395
	July 28-29	REM Audit Software	$ 195
	Oct. 24-28	Basic Auditor	$1,150
	Oct. 31-Nov. 1	Combustion Systems	$ 395
	Nov. 2-3	Mobile Homes	$ 395
	Nov. 3-4	REM Audit Software	$ 195

Basic Auditor fee will be discounted $50 for more than one registration from same company/agency.

Please indicate method of payment:

____ Check enclosed payable to KBSI
____ Send invoice*
____ Charge to: ___VISA ___MC ___Amex ___Disc.

Cardholder's Printed Name as it appears on card

Cardholder's Signature

Card Number Expiration Date

Note: all fees are waived for employees of Kansas Weatherization Assistance Program subgrantees. Verification is required. Please initial here to request waiver of fees: _____

Kansas Building Science Institute is committed to making services, activities and programs accessible to all participants. If you have special requirements due to disabilities or dietary restrictions, please contact KBSI at least two weeks before the start of the workshop.

KBSI KANSAS BUILDING SCIENCE INSTITUTE