

Fundamentals of Energy Efficiency

Providing Work-Ready Solutions for Weatherization



Course Description

iCAST's *Fundamentals of Energy Efficiency* 40-hour course was designed to introduce trainees to the technology and processes associated with residential energy efficiency auditing & installation. The trainees will receive foundational knowledge and hands-on training from industry experts that prepares them for entry-level efficiency work. The course curriculum will cover 'best practices' in auditing and reporting procedures for recommending improvements to residential energy usage. Furthermore, the course will provide trainees with first-hand experience of the most common efficiency installation techniques, such as insulating, air sealing, weather-stripping, and identification of energy wasters.

Note: This course is also available online using game simulation and high-quality video demonstration to supplement hands-on activities.

Upon successful completion, trainees receive a *Certificate of Completion* from iCAST.

Learning Activities

- Hands-on experience performing an energy audit
- Setup and perform a blower door test
- Hands-on use of diagnostic equipment, e.g. combustion analyzer, infrared camera, kW reader
- Analyzing energy bills
- Cost justification and analysis
- Dissecting an audit report
- Educating the homeowner/client
- Energy conservation tips and techniques
- Practical math with daily exercises
- Hands-on insulating techniques
- Hands-on weather-stripping and air sealing for doors and windows
- HVAC troubleshooting and maintenance
- Identifying different types of water heaters
- Combustion appliance zone testing
- Identifying indoor air quality and building safety issues
- Understanding energy use of appliances, electronics, and lighting in the home
- Test-out for BPI Certification course (if applicable)
- Career panel and networking session
- Resources for contractors and textbook provided



"The Fundamentals of Energy Efficiency and BPI Building Analyst certification will significantly increase my business's ability to be competitive and make a decent living."

– Michele M., iCAST Trainee

Textbook

Residential Energy: Cost Savings and Comfort for Existing Buildings, 5th Edition, Krigger, Dorsi,
ISBN-13: 978-1880120095