THOMAS EDISON STATE COLLEGE

101 West State Street
Trenton, NJ 08608-1176

Office for Assessment of Professional and Workplace Learning

Academic Program Review
of
Accredited Installer Workshop Certification

Granted by the
International Ground Source Heat Pump Association
(IGSHPA)

Review Date:
February 19, 2013

Effective Dates:
January 2003 – February 2018

Table of Contents

PROFILE - ACCREDITED INSTALLER WORKSHOP

The three day comprehensive Installation Workshop is designed for GSHP developers, architects, manufacturers, distributors, dealers, installers, HVAC contractors, trenching/drilling contractors, and anyone who desires a working knowledge of this innovative technology. Representatives from public utilities, private utilities, and rural electric cooperatives can also benefit from training. Information gathered from the workshops can help utility representatives serve as a source of information regarding money-saving concepts.

Accreditation:

Upon successful completion of the workshop and passing the IGSHPA installer's exam, the participant will be issued IGSHPA accreditation as an installer of GSHP systems and will receive an installer's card and a certificate. Also, the participant will receive a membership with IGSHPA after completion of the Installation Workshop. Membership in IGSHPA is required to be an Accredited Installer and maintain accreditation by being recertified every 3 years.

About the International Ground Source Hat Pump Association (IGSHPA):

The International Ground Source Heat Pump Association (IGSHPA) is a non-profit, member-driven organization established in 1987 to advance ground source heat pump (GSHP) technology on local, state, national and international levels.

Headquartered on the campus of Oklahoma State University in Stillwater, Oklahoma, under the leadership of Dr. Bose who serves as executive director, IGSHPA utilizes state-of-the-art facilities for conducting GSHP system installation training and geothermal research.

The mission of International Ground Source Heat Pump Association (IGSHPA) and its membership is to promote the use of ground source heat pump technology worldwide through education and communication.

Source of Official Student Records:

For further information about the review, contact: Office for Assessment of Professional and Workplace Learning, Thomas Edison State College, 101 West State Street; Trenton, New Jersey 08608-1176, (609) 633-6271; apr@tesc.edu.

ACCREDITED INSTALLER WORKSHOP
ACADEMIC PROGRAM REVIEW

FEBRUARY 19, 2013

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ACCREDITED INSTALLER WORKSHOP

FEBRURARY 19, 2013

INDEX OF CERTIFICATIONS/CREDIT RECOMMENDATIONS

Page #	Certification Title	Effective Date	Credit Recommendation/Award	
			Cr/Level	Subject Area
6.	Accredited Installer Workshop	January 2003 – February 2018	3 UD	Sustainable Energy Technologies or Alternative Energy Technologies
Total Certifications Reviewed – 1				
Total Credits Recommended – 3				

Key: UD = Upper division baccalaureate level

Certification Sheet

Name of Credential: Accredited Installer Workshop

Credential Description: This certification denotes theoretical and practical knowledge of Ground Source Heat Pumps.

Effective Date: January 2003 – February 2018

Learning Outcomes: Upon successful completion of this credential, the student will be able to:

- Demonstrate familiarity with installation standards and techniques for closed-loop geothermal systems.
- Identify soils and rocks in the field and assign values of thermal properties for use when designing ground-coupled heat pump systems.
- Demonstrate familiarity with methods for installing horizontal and vertical buried pipe configurations for heat exchangers in closed loop geothermal systems.
- Demonstrate familiarity of proper grouting techniques and knowledge to select proper materials and mixtures for sealing vertical closed-loop geothermal heat exchange boreholes.
- Understand fundamental and technical information about the other disciplines involved in the geothermal process.

Major topics covered in the workshop and certification exam:

- Soil and Rock Identification
- Selecting, Sizing, and Designing Residential and Commercial Heat Pump Systems
- Designing and Configuring Closed-Loop Ground Heat Exchangers
- Pipe Joining Methods
- Installation of Ground Heat Exchangers
- Grouting Procedures for Ground Source Heat Pumps
- Flushing and Purging
- Introduction and Economics Marketing
- Using Ground Loop Heat Exchanger Software
- Evaluating Ground Source Heat Pump in System Performance

Assessment criteria: Successful completion of a three day workshop and examination

Credit Recommendation: In the upper division baccalaureate degree category, 3 credits in Sustainable Energy Technologies or Alternative Energy Technologies. *Note: To be eligible for this credit award, individuals must be current in the certification, which is renewable every 3 years.*

Credit Rationale: In the aggregate, enough academic content is evident in various geothermal areas to recommend credit. After a thorough review of the supporting materials available for the Accredited Installer Workshop, the credit recommendation is made based on coverage of soil and rock sampling, economics marketing, heat exchanger design and installation, and system performance evaluation. Moreover, this credential assumes a broad knowledge of green building science as well as college level mathematics. It is a specialized area that requires both practical and theoretical knowledge.