



OFFICE FOR ASSESSMENT OF PROFESSIONAL
AND WORKPLACE LEARNING

ACADEMIC PROGRAM REVIEW
of the
Insulator Energy Appraisal Professional (IEAP)
CERTIFICATION/NIA*

Review Date:
DECEMBER 20, 2012

Effective Dates:
January 2002 – December 2017

*National Insulation Association (NIA)

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PROFILE OF
***INSULATION ENERGY APPRAISAL PROGRAM/NATIONAL INSULATION ASSOCIATION**

The Insulation Energy Appraisal Program (IEAP) was developed by the National Insulation Association in the fall of 2000. This program is a major industry initiative designed to give facility/energy managers a better understanding of the true dollar and performance value of an insulated system. The program is a tool that quantifies the amount of energy and actual dollars a facility is losing with its current in-place insulation system. To date, more than 250 industry professionals have earned the title of "[Certified Insulation Energy Appraiser.](#)"

There are a number of reasons why facility managers want to consider an insulation energy appraisal at their location. These reasons include the potential for hundreds of thousands of Btu savings, the opportunity to improve process control and efficiency, contributing to a cleaner environment through the reduction of emissions into the atmosphere, and saving money through reduced fuel costs. Energy appraisals are starting to gain recognition outside of the industry and association as well.

Potential savings from insulation application and upgrades may reduce fuel consumption anywhere from three to 13 percent, according to the U.S. Department of Energy's (DOE) Industrial Assessment Center program.

By conserving thermal resources, insulation not only saves money but improves plant productivity. In this sense, insulation makes money for the plant. In addition, the expense relief that it provides becomes a new source of cash that can be applied to other processes in the plant, or to marketing and administration. All of these benefits make insulation a priority for manufacturers in a competitive marketplace.

NATIONAL INSULATION ASSOCIATION (NIA)

NIA is a not-for-profit trade association, representing the contractors, distributor, laminators, fabricator and manufacturers that provide thermal insulation, insulation accessories and components to the commercial, mechanical and industrial markets throughout the nation.

The 3E Plus computer program used in the Industrial Energy Appraisal program was developed by the North American Insulation Manufacturers Association.

The NIA seeks to raise awareness of the importance of insulation. A conservative estimate is that within one to three years of initial installation at least 10 % of exposed insulation in industrial and commercial facilities is missing or damaged.

Source of Official Student Records: *(Fill in student contact information at organization and/or documentation or certificate needed).*

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

*Information taken from NIA website: <http://www.insulation.org/articles/article.cfm?id=NN021002>

NATIONAL INSULATION ASSOCIATION
IEAP CERTIFICATION

DECEMBER 20, 2012

ACADEMIC PROGRAM REVIEW TEAM:

Linda Mather, Ed.D. (Team Facilitator)

Beacon Consulting Associates

Princeton, New Jersey

(609) 921-3173 (v)

(609) 683-0584 (f)

lmather@beaconconsults.com

www.beaconconsults.com

Hossein Assadipour, Ph.D.

Professor/Engineering Technology & Computer Science

Essex County College

Newark, New Jersey

(973) 877-1891

hassadi@essex.edu

Robert Steve Campbell

Level II Certified Infrared Thermographer

Mathias Metal Systems

Waverly, Tennessee

(731) 593-0952 (office)

Campbell4424@bellsouth.net (home)

G. Christopher P. Crall, P.E.

CCrall Consulting, LLC

Technical Consultant – National Insulation Association

Gahanna, Ohio

(614) 855-2240

ccrall@gmail.com

Ron L. King

Consultant & Past President

National Insulation Association

Kingwood, Texas

(281) 360-3438

RonKingRLK@aol.com

Certification Sheet

Name of Certification: Insulator Energy Appraisal Professional (IEAP)

Effective Dates: January 2002 – December 2017

Certification Description: The Insulation Energy Appraisal Professional is developed for Individuals who:

- have experience in commercial and/or Industrial construction, process, and maintenance industry or related fields.
- Are able to read construction drawings and relate them to insulation specifications.
- Understand principles and fundamentals of insulation and insulation systems. (Up to 10% of the final exam may cover basic heat transfer fundamentals.)
- Are able to recognize potential basic safety concerns during facility visits and Insulation system Inspections.

The program is available to insulation craft apprentices as well as practicing engineers, estimators, sales personnel and other parties interested in energy efficiency.

In order to maintain this certification, graduates are required to complete recertification every three years.

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

- Gather information for an appraisal including a customer interview and a facility walk-through.
- Use the 3E Plus computer program.
- Determine the optimum insulation material and thickness corresponding to energy and dollar savings.
- Determine the amount of green house gases saved through use of insulation.
- Analyze and complete the appraisal spreadsheet.
- Complete a final customer report.

Methodology:

Major topics covered on the certification exam are:

- Insulation fundamentals
- NIA Insulation Energy Appraisal
- Starting and completing the appraisal
- Facility walk-through
- 3E Plus computer program
- Modes of heat transfer

Methods of instruction include:

- A two day course followed by an examination

Assessment criteria:

- Final examination

Credit Recommendation: In the lower division associate/baccalaureate degree category, 1 credit in Math or Science elective, or toward a seminar/elective component of a capstone. This credit will be awarded to students who submit documentation of currency of this credential, based on the timeframe of the effective dates established by this Academic Program Review.

Credit Rationale:

Based on the prerequisite knowledge listed in the certification description and the information covered in the credential itself, one credit at the associate level is recommended.