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BUILDING ENERGY SIMULATION ANALYST - BESA OVERVIEW

ONLINE PROFESSIONAL COURSES LED BY THE
WORLD'S TOP SPECIALISTS

ONLINE TRAINING BY KRISHNAJI PAWAR

LEED AP(BD+C), GSAS CGP, GCP, ISO 14001

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MODULE
7

Professional energy modeling specialist certification

KRISHNAJI PAWAR - CEO & FOUNDER

LEED AP(BD+C),GSAS CGP,GCP,ISO 14001

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BUILDING ENERGY SIMULATION ANALYST - BESA OVERVIEW

AEE's Building Energy Simulation Analyst (BESA) professional certification is designed to recognize individuals with special expertise and experience in the area of utilizing building energy simulation software to assess a facility's energy performance.

Learning Objectives

- Introduction
- Getting Started with BEM
- Establishing the Model Scope
- Building Energy Modeling Tools
- LEED, Commissioning, & Energy Conservation
- Benefits of Building Energy Modeling
- **Certification for energy modeling specialists**
- Summary and Resources
- **Building Energy Simulation Analyst - BESA Practice Test V.4.1**



INTRODUCTION

- The ANSI-Accredited Personnel Certification Program (#1139) BEMP certification verifies that you are capable of utilizing various types of physics to model both new and existing buildings and systems.
- Energy modeling software outputs are evaluated, selected, used, calibrated, and understood in connection to building and system economics and energy performance.
- Building energy modeling is essential for retrofit design, code compliance, and real-time building control in commercial and institutional buildings.
- Modelers can combine building analysis, climate, construction materials, architectural design, and HVAC systems.



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CERTIFIED BUILDING ENERGY SIMULATION ANALYST

The AEE's Building Energy Simulation Analyst (BESA) professional certification aims to acknowledge persons who possess exceptional knowledge and practical experience in applying building energy simulation software to evaluate the energy efficiency of a facility.

Objectives:

- to raise the professional standards of those engaged in energy simulation.
- To improve the practice of energy simulators by encouraging energy simulation in a continuing education program for professional development.
- To identify persons with acceptable knowledge of the principles and practices of energy simulation through completing an examination and fulfilling prescribed standards of performance and conduct.
- to award special recognition to those energy simulation professionals who have demonstrated a high level of competence and ethical fitness in energy simulation.

Note: The Association of Energy Engineers is no longer accepting new applications for this certification program. If you are currently certified you are able to renew your certification.

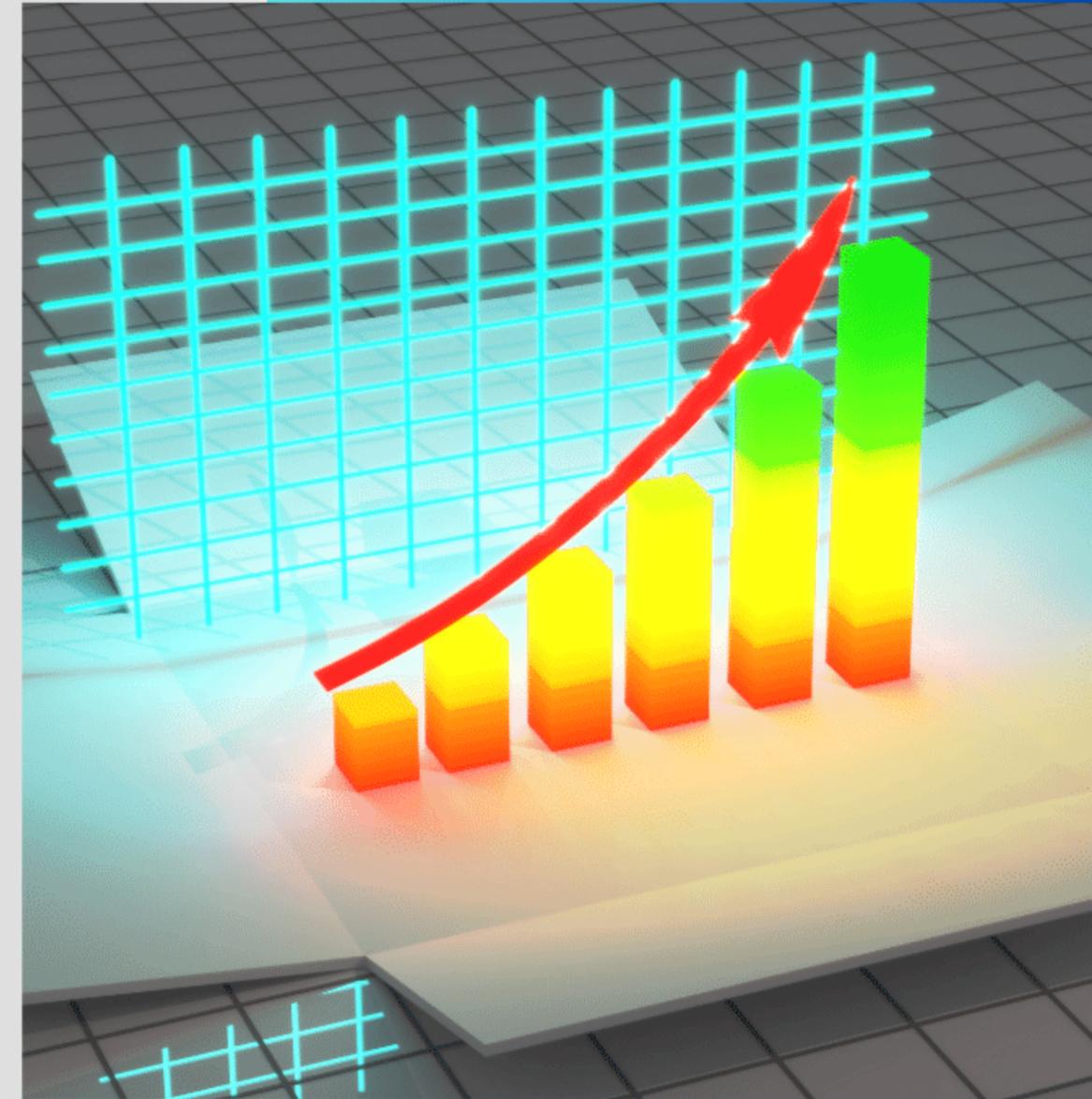
WHY ENERGY MODELING PROFESSIONALS PURSUE THE ASHRAE BEMP

- Advance your career prospects and enhance your reputation. View survey results.
- Exhibit a high level of proficiency in essential building energy modeling competencies and skills. Identify the BEMPs.
- The digital insignia issued by BEMP ensures improved recognition.
- ISO/IEC 17024 (ID #1139)-accredited personnel certification program of the ANSI National Accreditation Board (ANAB), ensuring validity and impartiality
- International membership society for advancement of heating, ventilation, air conditioning, and refrigeration.
- Validates job competency in internationally recognized technical information.
- Reflects industry best practices.



WHY ENERGY MODELING PROFESSIONALS PURSUE THE ASHRAE BEMP

- Career prospects and standing should be enhanced. Refer to the survey results.
- Exhibit a high level of proficiency in essential components of building energy modeling. Determine who is BEMP.
- Improved recognition is ensured by the BEMP digital emblem.
- IEC 17024 (ID #1139)-accredited ANSI National Accreditation Board (ANAB) personnel certification program, which guarantees validity and impartiality.





BEMP EXAM KNOWLADGE DOMAIN

Build knowledge and skills across the four (4) Domains of the BEMP exam, which are:



Domain I: Establishing the Modeling Scope

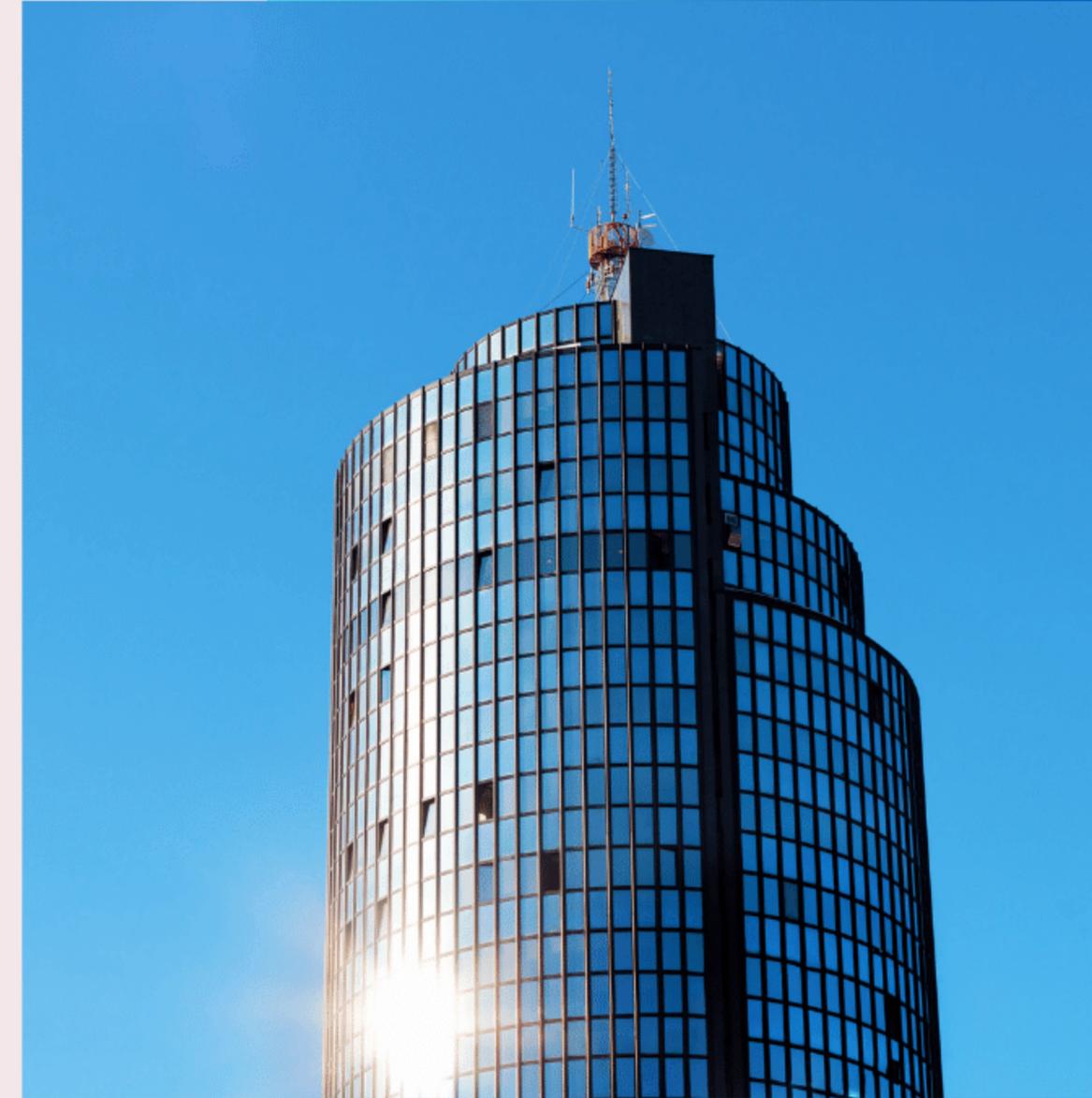
Domain II: Components of Building and Energy Systems

Domain III: Applications of Energy Models for Buildings

Domain IV: Interpretations of Energy Model Results

BEMP EXAM PREPARATION RESOURCES

- **Standards:** ANSI/ASHRAE Standard 55-2020, ANSI/ASHRAE Standard 62.1-2019, ANSI/ASHRAE Standard 90.1-2019 (SI), ANSI/ASHRAE Standard 189.1-2020, ASHRAE Standard 209-2018, ASHRAE Standard 211-2018, 2021ASHRAE Handbook—Fundamentals, 2020 ASHRAE Handbook—HVAC Systems & Equipment, 2019 ASHRAE Handbook—HVAC Applications Guidelines, ASHRAE Guideline 14-2014, ASHRAE Guideline 36-2021
- **ASHRAE Learning Institute (ALI) and eLearning Center Courses:** archived online courses, professional development seminars, short courses on ASHRAE Standards and Guidelines.
- **Other Organizations Resources:** Heat and Mass Transfer in Building Services Design, IESNA Lighting Handbook, Mechanical and Electrical Equipment for Buildings, Solar Radiation and Daylight Models.



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