

Agenda

Presented by Michael Nolan, AIA, LEED AP, CPHC

Understanding the Energy Efficiency of Conventional Construction

- Facts and figures on residential energy use
- History of energy-conserving residential construction
- Building code requirements
- Energy conservation incentives
- Development of PHIUS+ 2018 design standard

Passive House Standard: Purpose, Principles and Development

- History of certifying agencies in US: PHI and PHIUS
- Passive House Standard: voluntary performance-based building envelope energy standard
- Energy calculations: how and when to perform them
- Energy calculation tools: an introduction to tools and their functionality
- Assembling a team to ensure quality and performance
- Examining common design features of Passive Houses

Architectural Elements of Passive Houses

- Siting, sizing and orientation
- Super-insulated envelope with minimized thermal bridging
- Efficient ventilation
- Ultra-efficient lights, fixtures and appliances
- Summer shading and cooling strategies
- Winter solar gain and heat retention strategies
- Integrating renewable energy technologies

Mechanical and Electrical Systems in Passive Houses

- Optimizing heat gains
 - Passive solar heat gains
 - Indoor environmental heat gains
- Heating and cooling loads
- Space conditioning
- Renewable energy system integration
- Energy-efficient appliances

Evaluating Passive House Case Studies

- Adapting Passive House for Iowa
- Case studies: in the planning process, under construction and finished projects

Passive House: Planning, Design and Construction

Johnston, IA - Wednesday, May 22, 2019



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Learning Objectives

You'll be able to:

Review the history of energy-conserving residential construction.

Explore the purpose, principles and development of the Passive House standard.

Examine common design features of Passive Houses, including siting, sizing, orientation, insulation and ventilation.

Review mechanical and electrical systems in Passive Houses.

Adapt Passive House for Iowa and discuss Passive House case studies.



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Review the history of energy-conserving residential construction

Explore the purpose, principles and development of the Passive House standard

Examine common design features of Passive Houses

Review mechanical and electrical systems in Passive Houses

Discuss passive house case studies

Continuing Education Credits

Professional Engineers

6.5 PDHs

Architects

6.5 HSW CEHs

6.5 AIA HSW Learning Units

Contractors

Non-Credit Continuing Ed.



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Faculty

Michael Nolan, AIA, LEED AP, CPHC *Founder of Horizon Architecture in Iowa City, IA*

Mr. Nolan is a native of West Virginia and attended the United States Air Force Academy where he earned a bachelor of science degree in Aeronautical Engineering. He served for more than 10 years as a pilot in both the F-16 and T-38 in assignments across the globe including combat missions as part of Operation Iraqi Freedom.

Seeking a challenge that would meld his experience, technical expertise and passion for design, Mr. Nolan received a master of architecture degree from Virginia Tech. He earned his architect registration in Fall of 2012, just over two years after completing his degree.

Prior to founding Horizon Architecture, Mr. Nolan practiced architecture in a variety of firms, gaining extensive experience in a broad variety of projects. Projects include modernization to the Eisenhower Executive Office Building in Washington, DC; the Moss Center for the Arts at Virginia Tech; and Gateway Ticketing Systems Global Headquarters in Pottstown, Pennsylvania. Mr. Nolan founded Horizon Architecture to continue his mission of bringing thoughtful design and an unparalleled experience to his clients.

Horizon Architecture specializes in high-performance residential design. Mr. Nolan participated as an architect in the design of the Passive Aggressive House and Shafer Passive House, both in Wilton, Iowa. Horizon Architecture is currently designing and serving as a certified Passive House consultant for a new residence in Norwalk, IA.

Seminar Information

**Hilton Garden Inn Des Moines/
Urbandale**
8600 Northpark Drive
Johnston, IA 50131
(515) 270-8890

Tuition

\$289 for individual registration
\$269 for three or more registrations.

Included with your registration: Complimentary continental breakfast and printed seminar manual.

Receive a reduced tuition rate of \$101 by registering to be our on-site coordinator for the day. For availability and job description, please visit www.halfmoonseminars.org.

How to Register

- Visit us online at www.halfmoonseminars.org
- Mail-in or fax the attached form to 715-835-6066
- Call customer service at 715-835-5900

Cancellations: Cancel at least 48 hours before the start of the seminar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another seminar or the self-study package. You may also send another person to take your place.

Continuing Education Credit Information

This seminar is open to the public and offers 6.5 PDHs to professional engineers and 6.5 HSW continuing education hours to architects in all states. Educators and courses are not subject to preapproval in Iowa and neighboring states.

This seminar is approved by the American Institute of Architects for 6.5 HSW Learning Units (Sponsor No. J885). Only full attendance can be reported to the AIA/CES.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), New York (NYSED Sponsor No. 35), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York architects.

This event also offers a non-credit continuing education opportunity to contractors. It has not been reviewed by any state contractor licensing entity for course approval.

Attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire program. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

Additional Learning

Webinar Series

HEC-RAS Webinar Series

- **Hydraulic Principles and Applications**
Tues., April 2, 2019, 11:00 AM - 1:00 PM CDT
- **Working with the HEC-RAS User Interface**
Tues., April 2, 2019, 1:30 - 3:00 PM CDT
- **Water Surface Profiling**
Wed., April 3, 2019, 11:00 AM - 1:00 PM CDT
- **Steady Flow Surface Profile Demonstrations**
Wed., April 3, 2019, 1:30 - 3:30 PM CDT

Wood Construction

- **Design Specifications, Building Codes and Design Values**
Thurs., April 4, 2019, 11:00 AM - 12:30 PM CDT
- **Structural Sawn Lumber, Composite Lumber and Laminated Timber**
Thurs., April 4, 2019, 1:00 - 2:30 PM CDT
- **Prefabricated Wood I-Joists Trusses**
Fri., April 5, 2019, 11:00 AM - 12:30 PM CDT
- **Connectors and Fire Protection Design**
Fri., April 5, 2019, 1:00 - 2:30 PM CDT

Off-Grid Master Class

- **Off-Grid Master Class, Part I**
Wed., April 17, 2019, 11:00 AM - 2:15 PM CDT
- **Off-Grid Master Class, Part II**
Thur., April 18, 2019, 11:00 - 2:15 PM CDT

Soil Engineering

- **Introduction to Soil Engineering**
Thurs., April 25, 2019, 11:00 AM - 12:30 PM CDT
- **Design of Excavation Support Systems**
Thurs., April 25, 2019, 1:00 - 2:30 PM CDT
- **Slope Repair Techniques**
Fri., April 26, 2019, 11:00 AM - 12:30 PM CDT
- **Soil Engineering after College: Practical Approaches to Foundations and Retaining Structures**
Fri., April 26, 2019, 1:00 - 2:30 PM CDT

For more information visit:
www.halfmoonseminars.org/webinars/

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Audio recordings of this seminar are available for purchase starting at \$269. See registration panel for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Registration

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		Email address is required for credit card receipt, program changes, and notification of upcoming seminars and products. Your email will not be sold or transferred.
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Tuition

- () **I will be attending the live seminar.** Single Registrant - **\$289.00**. Three or more registrants from the same company registering at the same time - **\$269.00** each.
- () **I am not attending.** Please send me the self-study package:
- ☐ Downloadable MP3 Audio/PDF Manual for **\$269.00**.
 - ☐ CD/Manual Package for **\$289.00**.
- (S&H included. Please allow five weeks from seminar date for delivery)

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