

# Agenda

*Presented by*  
**David Schleicher, David Hawkins, and Joe Nickels**

## **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 the Central Plains  
Case studies: in the planning process, under construction and finished projects

**Passive House: Planning and Design**  
Overland Park, KS - Friday, May 17, 2019



Halfmoon Education Inc.  
PO Box 278  
Altoona, WI 54720-0278

NON-PROFIT  
U.S. POSTAGE PAID  
EAU CLAIRE, WI  
PERMIT NO. 2016

## Learning Objectives

### **You'll be able to:**

**Review** the history of energy-conserving residential construction.

**Explore** the Passive House standard and identify common and useful energy calculation tools.

**Discuss** Passive House siting, sizing and orientation, and evaluate seasonal heating and cooling strategies.

**Create** super-insulated building envelopes with minimal thermal bridging.

**Learn** how to optimize heat gains in the winter and consider integrating renewable energy systems.

**Review** case studies of completed passive house projects.



# Passive House: Planning and Design

Overland Park, KS - Friday, May 17, 2019



**Learn** about the history of energy-conserving residential construction

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

**Evaluate** architectural elements of passive houses

**Examine** mechanical systems in passive houses

**Discuss** case studies of completed passive house projects

## **Continuing Education Credits**

### **Professional Engineers**

6.5 PDHs

### **Contractors**

Non-Credit Continuing Ed.

### **Architects**

6.5 HSW PDHs/CE Hours

6.5 AIA Learning Units



HalfMoon Education Inc.  
WWW.HALFMOONSEMINARS.ORG



# Faculty

## David Schleicher *Prairie Design Build*

David is a third-generation builder, entrepreneur, construction and building science enthusiast. He believes that the construction industry is going through a revolution and is proud to be a part of it. He has built a team with expertise on several innovative designs, construction methods and products that clients will benefit from for generations to come. David's team has built four Passive Houses and has two underway which will be certified with PHIUS. The team's work has won several local awards, and the business has been recognized as top 25 under 25 employees in Kansas City. He is a Certified Passive House Consultant and a member of the HEMP mentoring program.

## David Hawkins *Prairie Design Build*

David has been a passionate building scientist and project manager at Prairie Design Build for six years. He has an International Business degree from Carleton University in Ottawa, Canada, along with a master's degree in Building Science from Ryerson University in Toronto, Canada. He has also been professionally trained by the Passive House Institute of the United States as a Certified Passive House Consultant, and Certified Passive House Builder. David has been working in the construction world for the past 12 years in a wide range of areas, including pre-construction planning and estimating, energy modeling and construction detailing, in the field installation of super-insulated envelope systems, heating/cooling and ventilation systems,

project management and client relationship building. He is especially proud of constructing projects that are durable and comfortable, that will have a low environmental impact, and that will have a positive long-lasting impact on the building occupants' health. David is excited that the building techniques used to achieve Passive House resiliency have become more cost-effective and believes that we will see greater market adoption moving forward.

## Joe Nickels *THRIVE Building Solutions*

Joe is a Certified Passive House Consultant and General Manager of Thrive Building Solutions. THRIVE provides consulting and product services for high performance and Passive House buildings in Kansas City. He has spent the last 10 years focused on reducing the environmental impact of our built environment. He has a master's degree in Environmental Planning from the University of Kansas.

# Seminar Information

**Hilton Garden Inn**  
5800 College Blvd.  
Overland Park, KS 66211  
(913) 345-2661

Registration  
8:00 - 8:30 am  
Morning Session  
8:30 - 11:45 am  
Lunch (On your own)  
11:45 am - 12:45 pm  
Afternoon Session  
12:45 - 4:30 pm

**Tuition**  
**\$289** for individual registration  
**\$269** for three or more registrants from the same company at the same time.

**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](http://www.halfmoonseminars.org).

### How to Register

- Visit us online at [www.halfmoonseminars.org](http://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/continuing education hours to engineers and 6.5 HSW PDHs to architects in all states. Educators and courses are not subject to preapproval in Kansas.

This seminar is approved by the American Institute of Architects for 6.5 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 seminar provides a non-credit continuing education opportunity to contractors. It has not been approved by any state contractor licensing board for mandated continuing education credit.

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

# Additional Learning

### Webinar Series

#### Foundation Damage and Repair

- **Structure Loads, Soil Mechanics, Bearing Capacity and Geo-Environmental Hazards**

Thurs., March 28, 2019, 11:00 AM -12:30 PM CDT

- **Foundation-Wall Design and Construction**

Thurs., March 28, 2019, 1:00 -2:30 PM CDT

- **Assessment of Foundation-Slab Damage & Repair Alternative**

Fri., March 29, 2019, 11:00 AM -12:30 PM CDT

- **Assessment of Foundation-Retaining Wall Damage & Repair Alternatives**

Fri., March 29, 2019, 1:00 -2:30 PM CDT

For more information visit:  
[www.halfmoonseminars.org/webinars/](http://www.halfmoonseminars.org/webinars/)

### Can't Attend? Order the Manual and Audio from the Live Seminar as a Self-Study Package!

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

## Passive House: Planning and Design

Overland Park, KS - Friday, May 17, 2019

| How to Register  |              | Registrant Information  |
|--|--------------|---|
| <b>Online:</b><br><a href="http://www.halfmoonseminars.org">www.halfmoonseminars.org</a> |              | Name: _____<br>Company/Firm: _____<br>Address: _____<br>City: _____ State: _____ Zip: _____<br>Occupation: _____<br>Email: _____<br>Phone: _____  |
| <b>Phone:</b><br>715-835-5900  |              | <b>Additional Registrants:</b><br>Name: _____<br>Occupation: _____<br>Email: _____<br>Phone: _____<br>Name: _____<br>Occupation: _____<br>Email: _____<br>Phone: _____  |
| <b>Fax:</b><br>715-835-6066  | <b>Code:</b> |   |
| <b>Mail:</b><br>HalfMoon Education Inc.,<br>PO Box 278, Altoona, WI<br>54720-0278        |              |   |
| <b>Complete the entire form.</b> Attach duplicates if necessary.                         |              | 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.<br><br>( )  I need special accommodations. Please contact me. |

### 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)

**Checks:** Make payable to HalfMoon Education Inc.

**Credit Card:** *Mastercard, Visa, American Express, or Discover*

Credit Card Number: \_\_\_\_\_

Expiration Date: \_\_\_\_\_ CVV2 Code: \_\_\_\_\_

Cardholder Name: \_\_\_\_\_

Billing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Signature: \_\_\_\_\_

Email: \_\_\_\_\_