

Agenda

Presented by Nathan D. Griswold, GRP, ASLA, CNSP

Defining Sustainable Roofs

- What makes a roof sustainable?
- Building code requirements
- Sustainable certifications and incentives

Extensive and Intensive Green Roofs

- Benefits of green roofs
- Determining which projects are candidates for green roofs
- Extensive and intensive green roofs
- Common components and materials
- Maintenance requirements
- Lifecycle analysis
- Impact on energy cost

Water Management with Blue Roofs

- Benefits of blue roofs
- Applications for blue roofs
- Water retention and storage
- Water reuse
- Life cycle analysis
- Maintenance requirements

Designing and Constructing Cool Roofs

- Reviewing cool roof standards and ratings
- Insulation
- Reflective materials
- Life cycle analysis
- Impact on energy cost

Exploring Sustainable Materials and Construction Techniques for Conventional Roofs

- Sustainability of roofing materials: shingles, metal, tile and stone
- Insulation options
- New features and construction techniques

Energy-Efficient, Sustainable Roofs
East Lansing, MI - Wednesday, January 29, 2020

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Learning Objectives

You'll be able to:

Explain what makes a roof sustainable, and learn about building code requirements that affect sustainable roofs.

Explore sustainable certifications and incentives.

Describe the differences between intensive and extensive green roofs.

Determine which projects are suitable for green roofs, and review maintenance requirements.

Explore the benefits of blue roofs, including how they retain, store and reuse water.

Describe cool roof standards and ratings, and consider the cool roof's impact on energy costs.

Examine sustainable materials and construction techniques for conventional roofs.



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Understand the benefits of green roofs

Identify projects that are candidates for green roofs

Examine water management with blue roofs

Learn about designing and constructing cool roofs

Explore sustainable roofing materials and construction techniques

Discuss building code requirements

Continuing Education Credits

Professional Engineers
6.5 Continuing Ed. Hours

Architects & Landscape Architects
6.5 HSW Continuing Ed. Hours
6.5 AIA LU|HSW
6.5 LA/CES HSW PDHs

International Code Council
.65 CEUs (Energy)

Contractors
Non-Credit Continuing Ed.



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AIA
Continuing
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Provider

Faculty

Nathan D. Griswold, GRP, ASLA, CNSP *President of Inhabitect, LLC*

Mr. Griswold has worked at the forefront of the green roof industry for 16 years. He has played critical roles in the design, development, sale, construction and successful establishment of nearly 1,000 green roofs across North America. From 2005-2013, he worked for one of the world’s largest waterproofing and green roof manufacturers. While in this position his sales strategies helped increase sales tenfold. Looking to get back to his Michigan roots, Mr. Griswold launched Inhabitect, LLC, in 2013, to serve as an independent resource for designing, building and growing all forms of living architecture that are functional, beautiful and affordable. With his international network of professional colleagues in architecture, landscape architecture, horticulture, engineering, construction and manufacturing, Mr. Griswold has the expertise to get the job done on time and on budget, exceeding client expectations.

Seminar Information

Marriott at University Place 300 Michigan Agricultural College Ave East Lansing, MI 48823 (517) 337-4440	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
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Tuition
\$289 for individual registration
\$269 for three or more simultaneous 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. You may also send another person to take your place.

Additional Learning

Webinar Series

Commercial Solar Peaker Batteries

- **Part I**
Wed., Feb. 5, 2020, 11:00 AM - 2:15 PM CST
- **Part II**
Thurs., Feb. 6, 2020, 11:00 AM - 2:15 PM CST

Pumping and Piping Systems

- **Introduction to Pumps: Operation, Principles and Calculations**
Thurs., Feb. 6, 2020, 11:00 AM - 1:00 PM CST
- **Pumping and Piping Design Standards and Codes**
Thurs., Feb. 6, 2020, 1:30 - 2:30 PM CST
- **Piping System Components, Materials and Calculations**
Fri., Feb. 7, 2020, 11:00 AM - 1:00 PM CST
- **Handling Pump and Piping System Problems**
Fri., Feb. 7, 2020 , 1:30 - 2:30 PM CST

Pavement Design

- **Principles of Pavement Design**
Wed., Feb. 12, 2020, 11:00 AM - 12:00 PM CST
- **Flexible Pavement Design**
Wed., Feb. 12, 2020, 12:30 - 2:30 PM CST
- **Rigid Pavement Design**
Thurs., Feb. 13, 2020, 11:00 AM - 1:00 PM CST
- **Maintenance, Rehabilitation and Sustainability of Pavements**
Thurs., Feb. 13, 2020, 1:30 - 3:30 PM CST

Ethical Issues for Engineers

- **Resolving Disputes and Handling Ethical Issues in Government Projects**
Fri., Jan. 31, 2020, 12:00 - 1:00 PM CST
- **Complying with Rules of Professional Conduct**
Fri., Feb. 14, 2020, 12:00 - 1:00 PM CST

For more information and other online learning opportunities visit:
www.halfmoonseminars.org/webinars/

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 and landscape architects in most states, including Michigan architects and engineers. Educators and courses are not subject to pre-approval in Michigan.

This seminar is approved by the American Institute of Architects Continuing Education System for 6.5 LU|HSW (Sponsor No. J885) and the Landscape Architecture Continuing Education System for 6.5 HSW PDHs. Only full attendance is reportable to the AIA/CES and LA/CES. Visit www.halfmoonseminars.org for complete AIA/CES information under this course listing.

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

The International Code Council has approved this course for .65 CEUs in specialty area of Energy (Preferred Provider No. 1232).

This seminar offers a non-credit continuing education opportunity to construction contractors. It has not been approved by any contractor licensing entity with a continuing education requirement.

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.

Registration

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How to Register		Registrant Information	
Online: www.halfmoonseminars.org		Name: _____	
Phone: 715-835-5900		Company/Firm: _____	
Fax: 715-835-6066		Address: _____	
Code:		City:_____State: _____ Zip_____	
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Additional Registrants:			
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Occupation: _____			
Email: _____			
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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.			
() 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.	
Checks: Make payable to HalfMoon Education Inc.	
Credit Card: <i>Mastercard, Visa, American Express, or Discover</i>	
Credit Card Number: _____	
Expiration Date: _____	CVV2 Code: _____
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