

Agenda

Presented by Jeffrey Snyder and Ibraheem Shunnar

Soil Mechanics

Effective pressure
Soil shear strength
Drained vs. undrained strength

Types of Slopes and Failures

Natural slopes
Engineered slopes
Creep failures
Rock slides – fall/topple failures
Rotational, translational, multiple/compound failures
Spread and flow failures
Typical causes of slope failures

Slope Stability Evaluation

Understanding geology and site conditions
Instrumentation
Basic concepts of slope stability evaluation
Limit equilibrium analysis
Stability computer programs

Slope Stabilization Methods

Unloading
Buttressing
Drainage
Reinforcing
Biotechnical slope stabilization

Slope Stabilization Case Studies

Biotechnical slope stabilization
Buttressing case study 1
Buttressing case study 2
Excavation/replacement
Retaining walls

Slope Stabilization and Landslide Prevention
Toledo, OH - Friday, January 19, 2018

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Learning Objectives

You'll be able to:

Understand the underlying soil mechanics of stable slopes and failed slopes.

Examine common types of slope failures, including creep, rock slides, rotational failures and spread failures.

Learn about techniques that can be used to evaluate slope stability.

Explore slope stabilization methods, including unloading, buttressing, draining and reinforcing.

Discuss slope stabilization case studies.



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Discuss the soil mechanics of stable slopes and failed slopes

Examine types of slope failures, including creep, rock slide, rotational failures, spread and flow failures

Review tools for evaluating slope stability

Explore slope stabilization techniques, including unloading, buttressing, reinforcing and biotechnical slope stabilization

Continuing Education Credits

Professional Engineers

6.5 PDHs

Architects

6.5 HSW CE Hours
6.5 AIA HSW Learning Units

Landscape Architects

6.5 HSW CE Hours
6.5 LA CES HSW PDHs

Floodplain Managers

6.5 ASFPM CECs

Construction Contractors

Non-Credit Continuing Ed.



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Faculty

Jeffrey Snyder
Senior Geotechnical Engineer at The Mannik & Smith Group, Inc.
Mr. Snyder is a geotechnical professional for transportation, commercial, industrial and municipal projects throughout the upper Midwest including in Ohio, Michigan, Illinois, Indiana, Pennsylvania, and Kentucky. He provides analyses and recommendations for shallow and deep foundation systems as well as landslide evaluation and remediation. He has co-authored several papers on lateral loading behavior of driven pile foundations. Mr. Snyder earned his B.S. and M.S. degrees in Civil Engineering from Brigham Young University.

Ibraheem Shunnar
Director of Engineering at The Mannik & Smith Group, Inc.
Mr. Shunnar has more than 25 years of experience in geotechnical engineering with expertise in specialty foundations, ground improvement, retaining walls, slope stability, instrumentation and waste management. He has a master’s degree in Geotechnical Engineering from the University of Michigan and is a registered professional engineer. He is the author of many articles and papers on geotechnical engineering. He was the project manager for the Fairlane Green redevelopment project, winner of the 2008 National Phoenix Award. He is also the recipient of the distinguished achievement award from the University of Michigan.

Seminar Information

Radisson Hotel at The University Toledo Medical Center
3100 Glendale Avenue
Toledo, OH 43614
(419) 381-6800

Registration
8:00 - 8:30 am
Morning Session
8:30 am - 12:15 pm
Lunch (on your own)
12:15 - 1:15 pm
Afternoon Session
1:15 - 4:30 pm

Tuition
\$279 for individual registration
\$259 for three or more registrations.
Each registration includes a 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
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• 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 CD/manual package. You may also send another person to take your place.

Can’t Attend? Order the CD/Manual Package:
An audio recording of this seminar is available for \$289 (including shipping). Allow five weeks from the seminar date for delivery. Please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Continuing Education Credit Information
This live lecture presentation 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, excluding Florida architects. This course offers 6.5 HSW contact hours to Ohio landscape architects. Educators and courses are not subject to preapproval in Ohio.

This seminar is approved by the American Institute of Architects for 6.5 HSW Learning Units (Sponsor No. J885) and the Landscape Architecture Continuing Education System for 6.5 HSW PDHs. Only full attendance can be reported to the AIA/CES and LA/CES.

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

The Association of State Floodplain Managers has approved this activity for 6.5 CECS..

This course offers a continuing education opportunity to construction contractors. It has not been approved by any state contractor licensing board.

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
Solar Photovoltaic Project Design and Development

- **Solar Photovoltaic Project Design and Development, Part I**
Thurs., Nov. 30, 2017, 11:00 AM - 3:15 PM CST
- **Solar Photovoltaic Project Design and Development, Part II**
Fri., Dec. 1, 2017, 11:00 AM - 2:15 PM CST

- Construction Cost Estimating**
- **Introduction to Cost Estimating**
Thurs., Dec. 7, 2017, 11:00 AM - 12:30 PM CST
 - **Cost Components - A Closer Look at the Estimates**
Thurs., Dec. 7, 2017, 1:00 - 3:00 PM CST
 - **Cost Estimate Organization**
Fri., Dec. 8, 2017, 11:00 AM - 1:00 PM CST
 - **Cost Estimating Topics**
Fri., Dec. 8, 2017, 1:30 AM - 3:00 PM CST

- Retaining Walls and Slope Stabilization**
- **Retaining Wall Basics**
Thurs., Dec. 14, 2017, 11:00 AM - 12:00 PM CST
 - **Geosynthetics and Retaining Walls**
Thurs., Dec. 14, 2017, 12:30 - 2:30 PM CST
 - **Slope Stability and Geosynthetics**
Fri., Dec. 15, 2017, 11:00 AM - 12:30 PM CST
 - **Slope and Retaining Wall Failures, Fixes and Prevention**
Fri., Dec. 15, 2017, 1:00 - 2:30 PM CST

- International Energy Conservation Code**
- **International Energy Conservation Code, Part I**
Thurs., Dec. 21, 2017, 8:00 - 11:00 AM CST
 - **International Energy Conservation Code, Part II**
Thurs., Dec. 21, 2017, 12:00 - 3:00 PM CST

- Seismic Design and Construction**
- **Seismology and Building Codes**
Wed., Dec. 27, 2017, 11:00 AM - 3:30 PM CST
 - **Seismic Design of Building Structures**
Thurs., Dec. 28, 2017, 11:00 AM - 3:30 PM CST

- The Distributed Battery Webinar Series**
- **The Distributed Battery Webinar, Part I**
Thurs., Dec. 28, 2017, 11:00 AM - 2:15 PM CST
 - **The Distributed Battery Webinar, Part II**
Fri., Dec. 29, 2017, 11:00 AM - 2:15 PM CST

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

Registration

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How to Register	Registrant Information
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Complete the entire form. 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.	

() I need special accommodations. Please contact me.

Tuition () I will be attending the live seminar. Single Registrant - \$279.00 . Three or more registrants from the same company registering at the same time - \$259.00 each. () I am not attending. Please send me the 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: <i>Mastercard, Visa, American Express, or Discover</i> Credit Card Number: _____ Expiration Date: _____ CVV2 Code: _____ Cardholder Name: _____ Billing Address: _____ City: _____ State: _____ Zip: _____ Signature: _____ Email: _____