

Agenda

Presented by Daniel P. Messmer, P.E., D. GE

Soil Investigation and Classification

Properties of soil

- Importance of recognizing soil properties
- Formation of soils
- Types of soils

Soil investigation

- Site reconnaissance
- Geology and visual observations
- Drilling and boring
- Test pits
- Establishing appropriate investigational methods
- Obtaining and reviewing geotechnical reports

Reviewing Hydraulic and Mechanical Properties of Soils

Soil permeability

Compressibility of soil

Soil hydraulics

- Saturation, hydraulic gradient, and conductivity

Drained and undrained shear strength

- Vertical and lateral earth pressure

Stress and failure in soils

Determining and Increasing Bearing Capacity

Calculating bearing capacity

Bearing capacity of shallow foundations

Bearing capacity of piers and piles

Increasing bearing capacity

- Draining and compaction
- Soil improvement

Determining and Increasing Slope Stability

Natural and engineered slopes

Reviewing basic concepts of slope stability

Understanding slope failures

Impact of surface water and groundwater

Examining slope stabilization methods

- Unloading
- Draining and compaction
- Reinforcement
- Soil improvement

Soil Mechanics, Bearing Capacity and Slope Stabilization
Erie, PA - Friday, May 4, 2018

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Learning Objectives

You'll be able to:

Identify properties of soils and discuss methods of investigating soil composition.

Understand how to obtain and review geotechnical reports.

Calculate bearing capacity for shallow and deep foundations.

Evaluate the stability of natural and engineered slopes.

Explore slope stabilization methods including drainage and compaction, soil improvement and reinforcement.



Soil Mechanics, Bearing Capacity and Slope Stabilization

Erie, PA - Friday, May 4, 2018



Understand the properties of soil and explore soil investigation procedures

Review hydraulic and mechanical properties of soils

Examine the bearing capacity of shallow and deep foundations

Study slope failures and consider the impact of surface and groundwater on slope stability

Examine slope stabilization methods including drainage and compaction, reinforcement, and soil improvement

Continuing Education Credits

Professional Engineers

6.5 PDHs

Geologists

6.5 PDHs

Architects

6.5 HSW Continuing Ed. Hours

6.5 AIA HSW Learning Units

Contractors

Non-Credit Continuing Ed.



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Faculty

Daniel P. Messmer, P.E., D. GE *Project Manager with The Gateway Engineers, Inc., in Pittsburgh*

Mr. Messmer has over 30 years of engineering experience in analysis, design, plan/specification development, project management/ personnel supervision for geotechnical, foundation and structural engineering projects in the transportation, industrial, municipal and commercial fields of civil engineering. Throughout his career he has placed an emphasis on quality control and staff training. Mr. Messmer is a member of the American Society of Civil Engineers, the American Concrete Institute, the American Society of Highway Engineers and the Society of American Military Engineers. He earned his B.S. degree in Civil Engineering from the University of Pittsburgh. Mr. Messmer was accepted into the Academy of Geo-Professionals in 2013.

Seminar Information

Hilton Garden Inn Erie
2225 Downs Drive
Erie, PA 16509
(814) 866-1390

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

- 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 CD/manual 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 continuing education hours to architects in all states, except Florida architects. This course also offers 6.5 PDHs to Pennsylvania geologists. Educators and courses for Pennsylvania engineers and geologists are not subject to pre-approval.

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 deemed an approved architect continuing education sponsor 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.

This program offers a non-credit continuing education opportunity to construction contractors. It has not been submitted to any state contractor licensing entity for continuing education approval.

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

March Webinar Series

Solar Photovoltaic Project Design and Development

- **Solar Photovoltaic Project Design and Development, Part I**
Wed., Mar. 7, 2018, 11:00 AM - 2:15 PM CST
- **Solar Photovoltaic Project Design and Development, Part II**
Thurs., Mar. 8, 2018, 11:00 AM - 2:15 PM CST

Deep Excavations

- **Introduction to Deep Excavations**
Thurs., Mar. 15, 2018, 11:00 AM - 1:00 PM CDT
- **Soil Mechanics, Cantilever Walls and Anchored Sheet Pile Walls**
Thurs., Mar. 15, 2018, 1:30 - 3:00 PM CDT
- **Braced Excavation Design**
Fri., Mar. 16, 2018, 11:00 AM - 12:30 PM CDT
- **ASD and LRFD Design**
Fri., Mar. 16, 2018, 1:00 - 2:30 PM CDT

HEC-RAS

- **Hydraulic Principles and Applications**
Thurs., Mar. 22, 2018, 11:00 AM - 1:00 PM CDT
- **Working with the HEC-RAS User Interface**
Thurs., Mar. 22, 2018, 1:30 - 3:00 PM CDT
- **Water Surface Profiling**
Fri., Mar. 23, 2018, 11:00 AM - 1:00 PM CDT
- **Steady Flow Surface Profile Demonstrations**
Fri., Mar. 23, 2018, 1:30 - 3:30 PM CDT

Commercial Energy Conservation Code

- **Commercial Energy Conservation Code and COMcheck Introduction**
Weds., Mar. 28, 2018, 11:00 AM - 1:00 PM CDT
- **Building Envelope Energy Efficiency**
Weds., Mar. 28, 2018, 1:30 - 3:30 PM CDT
- **Heating, Ventilation and Air Conditioning Systems**
Thurs., Mar. 29, 2018, 11:00 AM - 1:00 PM CDT
- **Service Water Heating, Power and Lighting**
Thurs., Mar. 29, 2018, 1:30 - 3:00 PM CDT

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

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.

Registration

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How to Register		Registrant Information
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Fax: 715-835-6066		
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278		
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)
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