

Agenda

Presented by Thomas H. Meyer, Ph.D.

Motivation: One System to Rule Them All

Local *ad hoc* coordinates are mutually incompatible
When we want to stitch *ad hoc* maps together, we discover problems
Maps cannot depict Earth's surface without distortion

Geodesy

Latitude and longitude
Earth's shape
Reference ellipsoids
Heights: gravity, the geoid, and Gauss
The Inferno: distances
(slope, geodesic, horizontal, topographic enlargement)

Map Projections

Rectangular, plate carrée
Conformal and authalic
Distortions in distances and directions
State plane coordinates

How to Map in the State Plane Coordinate System

Directly from geodetic: USACE CORPSCON, NGS state plane tool
From total-station observations

- Reductions
 - The forward problem
- Worked-out examples
- Using total-station data
 - Some interesting case studies

Working with the State Plane Coordinate System
Somerset, NJ - Friday, March 16, 2018

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Learning Objectives

You'll be able to:

Understand the state plane coordinate system, and discuss how it solves mapping problems created by the use of local coordinates.

Explore reference ellipsoids, heights, and distances.

Examine different types of map projections.

Discuss distortions in distances and directions.

Get tips on mapping in the state plane coordinate system.

Review case studies and worked-out examples using total-station data.



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Understand the purpose of the State Plane Coordinate System and discuss the problems that it resolves

Examine latitude, longitude, and reference ellipsoids

Explore the use of map projections

Learn how to map in the state plane coordinate system

Review worked-out examples using total-station data

Continuing Education Credits

Professional Land Surveyors

6.5 CPC Credits

Professional Engineers

6.5 CPC Credits



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Faculty

Thomas H. Meyer, Ph.D. *University of Connecticut*
Dr. Meyer is a professor in the Department of Natural Resources and the Environment at UConn’s College of Agriculture, Health and Natural Resources (CAHNR). He is a member of the American Society of Civil Engineers and the American Society for Photogrammetry and Remote Sensing, and he is a fellow and past president (2016) of the American Association for Geodetic Surveying. Dr. Meyer is a past president (2006-2007) of the Geomatics Society of New England (previously known as the New England Section ACSM) and a member of the editorial boards of the *Journal of Surveying Engineering* and *Surveying and Land Information Science*. Dr. Meyer earned his Ph.D. degree from Texas A&M University (College Station, 1998) where he was a research associate in the Mapping Sciences Laboratory. He was named a UConn Teaching Fellow (2015), and has taught geomatics courses at the graduate and undergraduate levels in geodesy, geographic information science, digital terrain modeling, spatial statistics, and global navigation satellite system surveying. Dr. Meyer has authored an undergraduate-level geodesy textbook and numerous peer-reviewed papers about surveying and mapping, and he teaches professional education seminars for surveyors throughout New England and the United States.

Here’s what past attendees had to say about the program and presenter Thomas H. Meyer:

“Very engaging, flexible, funny and knowledgeable.” – Land Surveyor

“Great program.” – Engineer/Attorney

“Very good—great speaker.” – Land Surveyor

Seminar Information

Doubletree by Hilton Somerset 200 Atrium Drive Somerset, NJ 08873 (732) 469-2600	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

\$279 for individual registration
\$259 for three or more registrations.

Each registration includes a complementary 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 (CDT), 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 CPC credits/continuing education hours to professional land surveyors and engineers in most states, including New Jersey.

HalfMoon Education is an approved continuing education provider for New Jersey engineers (Approval No. 24GP00000700), and the New Jersey State Board of Professional Engineers and Land Surveyors has approved this course for 6.5 CPC credits for professional land surveyors.

HalfMoon Education is approved by the New York State Education Department as a continuing education provider for engineers and land surveyors (NYSED Sponsor No. 35). This course is eligible for 6.5 continuing education hours/PDHs.

HalfMoon Education is an approved continuing education sponsor for professional land surveyors and engineers in Indiana, Louisiana, Maryland, North Carolina, and North Dakota. HalfMoon Education is also an approved education provider for Florida engineers.

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.

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.

Additional Learning

February Webinar Series

Building Operations and Efficiency

- **Identifying Energy Efficiency Opportunities in Major Renovations**
Thurs., Feb. 1, 2018, 11:00 AM - 12:30 PM CST
- **Integration of “Energy Modeling” in the Design of High Performance Buildings**
Thurs., Feb. 1, 2018, 1:00 - 2:30 PM CST
- **High Efficiency Building Design Standards**
Fri., Feb. 2, 2018, 11:00 AM - 12:30 PM CST
- **Commissioning and Operation of High Performance Buildings**
Fri., Feb. 2, 2018, 1:00 - 3:00 PM CST

International Mechanical Code

- **International Mechanical Code Background and Application**
Thurs., Feb. 15, 2018, 11:00 AM - 12:30 PM CST
- **Chapters 2-5: Definitions, Regulations an Ventilation**
Thurs., Feb. 15, 2018, 1:00 - 3:00 PM CST
- **Chapters 6-10: Ventilation, Appliances and Equipment**
Fri., Feb. 16, 2018, 11:00 AM - 1:00 PM CST
- **Chapters 11-15: Refrigeration, Piping and Appendices**
Fri., Feb. 16, 2018, 1:30 - 3:00 PM CST

National Electrical Code: A Solar Photovoltaic System Perspective

- **National Electrical Code for Building Professionals, Part I**
Wed., Feb. 21, 2018, 11:00 AM - 2:15 PM CST
- **National Electrical Code for Building Professionals, Part II**
Thurs., Feb. 22, 2018, 11:00 AM - 2:15 PM CST

Erosion and Sediment Control

- **Erosion and Sediment Overview**
Thurs., Feb. 22, 2018, 11:00 AM - 12:00 PM CST
- **Stormwater Permit Requirements and Procedures**
Thurs., Feb. 22, 2018, 12:30 - 2:00 PM CST
- **Stream Stabilization Measures**
Fri., Feb. 23, 2018, 11:00 AM - 12:00 PM CST
- **Best Management Practices and Maintenance**
Fri., Feb. 23, 2018, 12:30 - 2:30 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)

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