

Credit Information

The Past, Present, and Future of the NSRS: From NAD27 to NATRF2022 (and More!)

This interactive webinar offers 6.0 PDHs/continuing education hours to civil engineers licensed in most states and 6.0 PDHs to land surveyors licensed in all states, except those in New Jersey. Course approval is applied for and pending in Missouri and Tennessee.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider No. 0004647), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), North Carolina (S-0130), and North Dakota.

HalfMoon Education is deemed an approved continuing education provider for engineers and land surveyors licensed in New York via its registration with the American Institute of Architects Continuing Education System (Regulations of the Commissioner §68.14(i)(2) and §69-1.5(i)(2)).

HalfMoon Education is an approved continuing education sponsor for land surveyors licensed in Indiana (License No. CE21700059), Maryland, North Carolina (S-0130), and North Dakota.

HalfMoon Education is not seeking course approval for New Jersey land surveyors.

Land Description Systems

This interactive webinar offers 6.0 PDHs/continuing education hours to civil engineers licensed in most states and 6.0 PDHs to land surveyors licensed in most states (not approved in in New Jersey or Tennessee). Course approval is applied for and pending in Missouri.

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HalfMoon Education is an approved continuing education sponsor for land surveyors licensed in Indiana (License No. CE21700059), Maryland, North Carolina (S-0130), and North Dakota.

HalfMoon Education is not seeking course approval for New Jersey land surveyors.

This course has been approved for 6.0 CLE hours for Illinois and Nebraska attorneys, and course approval is applied for Kansas, Missouri, and Nebraska attorneys,

This webinar is approved for 6.0 CE hours for Kansas title insurance producers. Course approval is applied for Missouri insurance producers.

Introduction to GNSS Surveying

This interactive webinar offers 7.5 PDHs/continuing education hours to civil engineers licensed in most states and 7.5 PDHs to land surveyors licensed in all states. Course approval is applied for and pending in New Jersey.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider No. 0004647), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), North Carolina (S-0130), and North Dakota.

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Completion certificates will be awarded to participants who complete these events, respond to prompts, and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

February Land Webinars for Engineers, Surveyors and Other Professionals

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February Land Webinars

The Past, Present, and Future of the NSRS: From NAD27 to NATRF2022 (and More!)

- Thursday, February 4, 2021 | 9:00 am - 4:00 pm CST

Land Description Systems

- Wednesday, February 10, 2021 | 11:00 am - 2:15 pm CST

- Thursday, February 11, 2021 | 11:00 am - 2:15 pm CST

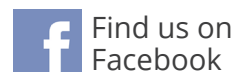
Introduction to GNSS Surveying

- Thursday, February 18, 2021 | 10:30 am - 2:30 pm CST

- Friday, February 19, 2021 | 10:30 am - 2:30 pm CST

Have questions or wish to register by phone?

Give us a call at 715-835-5900 and press 1 for Customer Service.



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HalfMoon Education Online Learning February Land Webinars for Engineers, Surveyors and Other Professionals



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- 6.0 PDHs (see inside for details)

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To register visit us online at

www.halfmoonseminars.org

or call our Customer Service Department at (715) 835-5900



HalfMoon Education Inc.
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The Past, Present, and Future of the NSRS: *From NAD27 to NATRF2022 (and More!)*

Thursday, February 4, 2021 | 9:00 am - 4:00 pm CST (including a 30-min. break)

Tuition: \$289 per registrant, \$199 per registrant for three or more

Credits:

Civil Engineers: 6.0 PDHs in All States

Professional Land Surveyors: 6.0 PDHs in Most States, 7.0 Florida CE Hours, Pending Approval in Missouri and Tennessee, Non-Credit in New Jersey

NGS Mission, Products, and Services

The National Spatial Reference System (NSRS)

The NOAA CORS Network (NCN)

Datum or reference frame?

What is an epoch?

Geometric Reference Frames

International terrestrial reference frame

History/overviews - USSD, NAD27, and NAD83

Four terrestrial reference frames of modernized NSRS (NATRF2022, et al)

Euler pole parameters of 2022 (EPP2022)

Intra frame velocity model of 2022 (IFVM2022)

Application of EPP2022 and IFVM2022

State plane coordinate system of 2022 (SPCS2022) – it'll be dynamic too

Geopotential and Vertical Datums

History/overviews - NGVD29 and NAVD88

Geoids, gravity, and equipotential

Types of geoid models

Gravity data collection

Sea level change and the geoid

Space Geodetic Techniques

GNSS, SLR, VLBI, DORIS

New Terminology in the Modernized NSRS

New point types in a new database

The Online Positioning User Service (OPUS)

Review of OPUS-RS, OPUS-S, and OPUS projects

OPUS shared solutions – GPS on bench marks; age-limiting of observations

Future developments – OPUS projects for RTK/RTN/PPK

Other Aspects of Modernization

Submitting data to the future NSRS database

NGS Coordinate Conversion and Transformation Tool (NCAT)

Deprecation of the US survey foot

Presented by

Jeff Jalbrzikowski, P.S., GISP, CFS *Appalachian Regional Advisor, National Geodetic Survey*

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Can't Attend? Order the Webinar as a Self-Study Package!

Recordings of these webinars are available for purchase. Visit us online 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.

Land Description Systems

A Two-Day Webinar Series

Tuition: \$289 per registrant, \$199 per registrant for three or more

Credits:

Civil Engineers: 6.0 PDHs in All States

Land Surveyors: 6.0 PDHs in Most States, 7.0 Florida CE Hours, Pending Approval in Missouri

Title Insurance Producers: Kansas: 6.0 CE Hours, Missouri: Pending

Attorneys: Illinois: 6.0 CLE Hours, Kansas: Pending, Missouri: Pending, Nebraska: 6.0 CLE Hours, North Dakota: 5.0 General CLE hours (1.0 Ethics CLE Hour)

Land Description Systems Day One

Wednesday, February 10, 2021 | 11:00 am - 2:15 pm CST (including a 15-min. break)

Working with Metes and Bounds Descriptions

Basic land description concepts: distances, directions, circular curves, mathematical closure, state plane coordinates

Reading a metes and bounds description

Writing a description

Drawing a description

Software for mapping, drawing and locating described lands

Working with the U.S. Public Land Survey System (PLSS)

PLSS basics: meridians, baselines, ranges, townships, sections

Public Land Survey System (PLSS)

Aliquot parts

“Part of” descriptions

Reading a PLSS description

Writing a description

Drawing a description

Software/websites for mapping, drawing and locating described lands

Land Description Systems Day Two

Thursday, February 11, 2021 | 11:00 am - 2:15 pm CST (including a 15-min. break)

Statutory Plats in Public Land Survey States

Duties under Plat Act

Certification and recording

Affidavits and exceptions

Reading and locating platted descriptions

Writing a description

Drawing a description

Software/websites for mapping, drawing and locating described lands

Describing Rights to Access Land

Private easements

Utility easements

Utility rights-of-way

Public rights-of-way

Presented by J Cole Helfrich *Craig R. Knoche & Associates, P.C.*

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To register, view detailed presenter biographies, and see other learning opportunities, please visit:

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Introduction to GNSS Surveying

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Credits:

Civil Engineers: 7.5 PDHs in All States

Professional Land Surveyors: 7.5 PDHs in Most States, 7.5 Florida CE Hours, 7.5 Texas PDHs, 7.5 Tennessee PDHs, Pending Approval in New Jersey

Introduction to GNSS Surveying Day One

Thursday, February 18, 2021 | 10:30 am - 2:30 pm CST (including a 15-min. break)

Introduction to GNSS

History of GPS

GPS vs GNSS

Applications in surveying

Benefits and draw backs

Fundamentals of GNSS

GNSS theory and science

GNSS measurements

Overview of methods of GNSS surveying

GNSS Surveying Errors

Accuracy vs. precision

Single vs redundant measurements

Error/quality estimates

Error causes

Error mitigation

Coordinate Systems and Units

Meters/feet/us feet/international feet

Geodetic coordinates

Projected coordinates

Local system vs defined system

Q&A/Wrap Up

Introduction to GNSS Surveying Day Two

Friday, February 19, 2021 | 10:30 am - 2:30 pm CST (including a 15-min. break)

GNSS Surveying Methods & Best Practices

Survey setup

Site calibration vs. defined coordinate system

Basic data collection and processing

RTK methods

Static methods

GNSS Surveying Data Management

Data storage/backup/formats

Datum transformations

Time dependency of data

Data processing

GNSS Surveying Case Studies

Static control campaign

RTK control campaign

RTK topography

UAS ground control

Q&A/Wrap Up

Presented by Chris Pucci, PLS *Project Surveyor-New Technology, Oregon DOT*

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