



# Survey Mathematics for Survey Technicians

Friday, February 16, 2018

Clark University, MetroWest Campus

333 Turnpike Road (Route 9), Southborough, MA (off I-495, Exit 23A)

7:30 - 8:00 AM Registration; 8:00 AM - 4:00 PM Seminar

This day-long seminar will cover surveying mathematic topics contained in the NCEES Fundamentals of Surveying (FS) and the Principals and Practice of Surveying (PS) examination Reference Handbooks not covered in MALSCE's February 2016 mathematics seminar.

## Topics to be discussed:

- Probability and Statistics
- Confidence Intervals
- Spherical Triangles
- Horizontal Spiral Curves
- Astronomy
- Curvature and Refraction
- Photogrammetry
- Physics
- Geodesy
- State Plane Coordinates
- Electronic Distance Measurements
- Stadia
- Normal Distribution Curve

The Economics section of the handbooks will not be covered in this seminar.

The goal of this seminar is to familiarize the attendee with the use of formulas contained in the Reference Handbooks, it is not a comprehensive study of the topics included for discussion.

This seminar is presented as preparation for the NCEES examination for licensing in surveying. Those planning to sit for an examination, as well as individuals who would like to refresh or improve upon their current knowledge of survey mathematics, are encouraged to attend this seminar.

The FS Reference Handbook, which will be included as a seminar handout, is also available at the NCEES website, <https://ncees.org/>. NCEES requires a user account to download the handbook. After login go to Reference Handbooks, FS Reference Handbook. <https://account.ncees.org/reference-handbooks/>.

*Attendees should bring a scientific calculator that they are familiar with operating, capable of trigonometric (and inverse) functions and conversion between decimal degrees and degree – minutes – seconds. (Note: The instructor will be unable to assist with specific, calculator-related questions.) NCEES has a calculator policy limiting the model of calculator examinees may use, see <https://ncees.org/exams/calculator/>.*

## Presenter

### Joseph McNichols, PLS

Joseph McNichols was licensed in 1996 as a Professional Land Surveyor in the Commonwealth of Massachusetts. He has been employed in the surveying profession continuously since 1985, initially working as an instrument operator progressing to licensed professional. He is adjunct faculty in the College of Professional and Continuing Education at Wentworth Institute of Technology. At Wentworth he taught Survey Measurement, Construction Surveying, Legal Aspects of Surveying, and Massachusetts Regulations Affecting the Surveying Profession.

Joseph is a registered member of the Massachusetts Association of Land Surveyors and Civil Engineers (MALSCE) and the National Society of Professional Surveyors (NSPS). In 2005, MALSCE awarded him a Presidential Citation for his work in surveying education and in 2007 he was named Surveyor of the Year.

## Registration Information

Registration fees are \$200/person for MALSCCE members and \$250/person for non-members.

Registration fee includes a continental breakfast, two snack breaks, lunch and all seminar handouts.

**Registration deadline is Tuesday, February 13, 2018.** Seminar registrations will be accepted via fax, mail or online. Complete the registration form below fax it to 617/227-6783. Mail your registration form and check (payable to "MALSCCE") to: MALSCCE, The Engineering Center, One Walnut Street, Boston, MA 02108-3616. Use Visa, MasterCard or American Express to register online at [http://bit.ly/MALSCCESeminar\\_2-19-16](http://bit.ly/MALSCCESeminar_2-19-16). To register online for this seminar at the MALSCCE member rate, login using your MALSCCE assigned username and password. If you do not know your login information call 617/227-5551. Registrations are processed on a first-come, first-served basis. No refunds will be given after the January 19, 2018 registration deadline. No-shows will be billed.

## Continuing Education

This seminar is worth 6.5 professional development hours (subject to state-specific exclusions; seek clarification from appropriate state authorities). All seminar participants will receive a certificate documenting attendance at the end of the seminar. Please complete the registration form with your legal name, address, and other contact information so that you will be properly identified on the certificate.

## Tax Information

Expenses incurred for education undertaken to maintain and improve professional skills (including travel, meals and lodging) may be tax-deductible.

## Location

**Clark University, MetroWest Campus, 333 Turnpike Road (Route 9), Southborough, MA**

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## Registration Form

### Survey Mathematics for Survey Technicians

Friday, February 16, 2018, Clark University, MetroWest Campus, 333 Turnpike Road (Route 9), Southborough, MA 01772

#### Registrant Information

Name: \_\_\_\_\_

Company (if applicable): \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip Code: \_\_\_\_\_

Phone \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Dietary Restrictions: \_\_\_\_\_

#### Registration Fees

\$200 MALSCCE Member\*

\* Members of CALS, MSLS, NHLA, NYSAPLS, RISPLS and VSLS can attend for the member rate. Please check the appropriate box below:

CALS

MSLS

NHLA

NYSAPLS

RIPLS

VSLS

\$250 Non MALSCCE Member

#### Total Amount Enclosed

\$ \_\_\_\_\_

Make checks payable to "MALSCCE" and mail with completed form to: MALSCCE, The Engineering Center, One Walnut Street, Boston, MA 02108-3616

Or Pay with (Check one):

Visa

Master Card

American Express

Card Name: \_\_\_\_\_

Card Number: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

Billing Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip: \_\_\_\_\_

Signature: \_\_\_\_\_

- Registration is processed on a first-come, first-served basis. Registration deadline is Tuesday, February 13, 2018.
- No refunds will be given after this date. No-shows will be billed.
- In the event of inclement weather, call our weather line at 617/305-4118 on January 25 after 3:00 PM for a recorded message update
- Questions? Call 617-227-5551.