

## Course Summary

### Questions:

- Ever wonder what the terms NGVD or NAVD are?
- Do you know how to read a NGS Bench Mark data sheet?
- Can you take a field bench run and adjust it under field conditions?
- What types of level runs are there and what are their differences?
- Do you know the operational procedures appropriate to the leveling standard you are trying to meet?

The purpose of this course is to give the professional surveyor and surveying technician information that he or she can use both in the field and office, as well as a background platform for the Fundamentals of Land Surveying exam.

As a land surveyor, one of the important aspects of our job is the ability to perform accurate level runs or trigonometric runs to establish bench marks in order to gather accurate vertical data that will be used to build structures, roads or development sites.

The professional surveyor must be able to decide which type of leveling he or she must perform and how to spot errors and field adjust them.

The surveyor must also be able to identify the equipment required to complete the task to established leveling standards, and understand the various types of Bench Marks that he will encounter in the field.

## Workshop Requirements

In order to realize the potential of the information provided in this workshop, registrants must be able to plan for the workshop in advance. The following requirements of this workshop must be met:

1. Bring a calculator that you are familiar with. This should be the type that are permitted into the FS exam.
2. Complete a short exam following the course in order to receive a certificate for the class.

## Learning Objectives

Upon successful completion of this course, participants will be able to:

- Knowledgeably apply the concepts of the different types of level work performed by surveyors.
- Find and apply operational methods and minimum closure to meet established leveling standards
- Perform the necessary adjustments to level runs.

Perform necessary adjustments to the equipment as needed .

## Costs, Refunds, Cancellation Policies

Registration fee for the workshop: \$150 for CALS members, \$200 non-members, \$25 students.

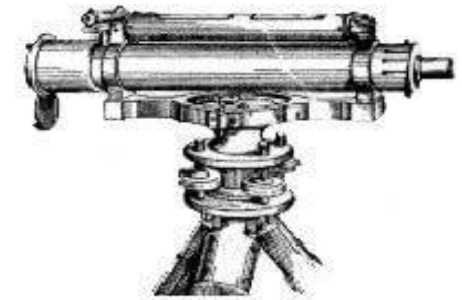
Members of other state surveying societies are welcome.

Full refunds for cancellations made 48 hours prior to the workshop.

Connecticut Association  
of Land Surveyors  
Presents:



# Leveling for Land Surveyors



**Edwin Rhodes PLS**

**Friday, March 29, 2019  
8:30am - 3:30pm**

**CCSU Institute for Technology  
& Business (ITBD)  
185 Main Street  
New Britain, CT**

**For more information:  
jjdoody@snet.net 203-933-3850**

### Workshop Instructor

Edwin Rhodes began his career in land surveying in 1986, as an entry Survey Technician working for LWF Land Surveying in Branford, CT. Attending many CALS courses, he gained knowledge in both field procedures and surveying computations. In 1993, he joined the firm of Rocco V. D'Andrea, Inc. in Riverside, CT where he worked as a Survey Technician. Mr. Rhodes became a Land Surveyor in Training in 2015 and continued his education in GPS / RTK field work and post-processing static observations.

In 2017, he became a Licensed Land Surveyor in the State of Connecticut and in 2019 passed his LS exam for the State of New York.

Mr. Rhodes continues to work for RVDI and currently is the Vice President of the Land Surveyors in Private Practice (LSPP) of Fairfield County. He has previously taught CALS seminars for introduction to surveying topics for surveying technicians.

### Parking

Parking is available in the Municipal Parking Garage in back of the ITBD building (access is on Chestnut Street just south of Main Street). Bring your ticket with you to be stamped for free parking

Map: <http://www.ccsu.edu/itbd/directions/default.htm>

### Schedule

- 8:00 - 8:30am Registration, Coffee+
- 8:30 – 9:30am
  - Introduction
  - Types of leveling equipment
  - Instrument care and adjustments
- 9:30 – 10:15am
  - Types of leveling runs
- 10:15am - 10:30 Coffee Break
- 10:30 -11:00am
  - Bench Marks
- 11:00am - 12:00pm:
  - Basic leveling procedures
  - Leveling run calculations and adjustments
  - Leveling Standards, Federal & State
  - GNSS and leveling standards
- Noon - 12:45pm Lunch provided
- 12:45 -1:15
  - Exercise #1
- 1:15 - 2:15pm
  - Trigonometric Runs
- 2:15 - 2:45pm
  - Exercise #2
- 2:45 - 3:30 pm:
  - Complete exercises and turn in for PDH credit.
  - Complete Questionnaire.

**SECURING THE FUTURE  
THROUGH EDUCATION**

### REGISTRATION: LEVELING FOR SURVEYORS March 29, 2019

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

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

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

Credit Card Num: \_\_\_\_\_ Expiration date: \_\_\_\_\_

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

Registration Fee \$150 for CALS members & members of New England & NY Professional Surveying Societies  
\$200 non-members, \$25 students. Includes continental breakfast, lunch, parking & handouts.

**Make Check Payable to : CALS and send to CALS, 78 Beaver Road, Suite 2-J, Wethersfield, CT 06109**

Phone (860) 563-1990 Fax (860) 529-9700 email [kathy@ctsurveyors.org](mailto:kathy@ctsurveyors.org)