

LEARN *CST* 1

INFORMATION | PROCEDURES | KEY DATES

Let's Get Started

LearnCST is the exclusive online exam prep solution for those pursuing the National Society of Surveyors (NSPS) Certified Survey Technician (CST) certification. Our training follows a quarterly format, offering students a chance to train for 90 days then sit for an exam at the first available opportunity.

Flexible Learning

While you can proceed through the training at any time or pace, we advise following the quarterly timetable on page two when possible. Group accounts are assigned an account manager to assist with monitoring individual study progress.

The Fast Track

Those that are ready to target an exam date are encouraged to join our "Fast Track". In addition to full access, we assist with arranging the examination. View registration options at: learncst.com/join-the-fast-track



WELCOME TO LEVEL 1

Since 1988, the CST program has certified thousands of individuals like yourself. During that time, the land surveying profession has evolved considerably thanks to technological innovation. While we're eager to share the latest GeoTech, we're most excited to share the foundational principles of land surveying.

Understanding and ultimately proving your grasp of the "basics" will not only make you a better surveyor but provide you a considerable advantage as the job evolves. Knowledge of historical context in measurement science is important. At the end of the day, Level I technicians are required to demonstrate knowledge of basic first aid skills and safety requirements.

Beyond this, a person in this position should possess basic knowledge of field operations and types of surveys as well as familiarity with field equipment and procedures used in these functions. Additional skills required include computational ability, survey note taking, drafting/CAD and map reading. You may or may not know this material. What's important is knowing what to expect in the exam and preparing for it.

2023 COURSE SCHEDULE

Quarterly Fast-Track Format



Message from our lead instructor

Whether you're just starting out or have been in the profession for years, CST provides an excellent opportunity to distinguish your technical abilities. As with anything in life, how far you go is ultimately up to you! With that in mind:

- LearnCST (or any resource, for that matter) cannot guarantee that you'll pass the CST exam. The good news is that you're welcome to train with us until you do!
- The open book CST exam tests your ability to search for and find information. It assumes some basic technical knowledge and mathematical ability (more as one advances through the levels) but you're not expected to know all the answers by heart. Examinees must be flexible and adaptive.

I encourage you to follow our recommendations. If you'd like to review something specific, please don't hesitate to drop us a line!

Cheers,

Glen Thurow, PS, CFedS
instructor@learncst.com

In a nutshell, we've built LearnCST around each level's respective "Work Elements"; registered students should review our website, "offline" material and outside resources in tandem. Each work element ends with an online quiz. While you can review material and proceed at any pace, we recommend that you complete quizzes following the suggested schedule below. Completing sections at the following pace will allow you to move alongside other technicians and take part in regular live sessions with additional exercises and review opportunities.

QUARTERLY PROGRAM (2023)

Suggested material completion dates

Completion of Work Elements & Quizzes 1-4:

Q1 = Jan 27; Q2 = Apr 21; Q3 = July 28; Q4 = Oct 27

Completion of Work Elements & Quizzes 5-8:

Q1 = Feb 24; Q2 = May 19; Q3 = Sep 1; Q4 = Nov 24

Completion of Work Elements & Quizzes 9-11:

Q1 = Mar 24; Q2 = June 23; Q3 = Sep 22; Q4 = Dec 29

Examination Applications Due:

Q1 = Apr 21; Q2 = Jul 21; Q3 = Oct 20; Q4 = Jan 26

*Notification will be provided to all students.

Regarding Instructor Assistance & Live Sessions

Questions may be submitted throughout the program at any time. In the event you require assistance with a topic, contact instructor@learncst.com to determine the best course of action. All Fast Track students will be notified of class discussion opportunities such as webinars and live sessions.

QUARTERLY SESSIONS & OTHER RESOURCES

WINTER: January 9th to March 27th

SPRING: April 10th to June 26th

SUMMER: July 10 to September 25th

FALL: October 9th to December 19th

*Free to all Fast Track registrants. A chance to review each work element, ask questions and more.

Table of Contents

1: Survey Types and History

2: Field Equipment & Operations

3: Survey Control

4: Survey Computations

5: Office Operations, Plan Reading and Preparation

6: First Aid & Safety

7: Study Guide + Resource Checklist

WHAT CAN I EXPECT ON THE EXAM?

Level 1 is a 200 question (multiple choice) open book exam that takes up to four hours to complete. Registered LearnCST students can turn to the study guide and resource checklist at the end of this manual for recommendations on additional resources, how to go about scheduling your examination and what to bring.

Our program addresses the same work elements found on the CST exam—approximate question amounts for each topic are below:

Survey Types and History (15 Qs): Knowledge of the different types of surveying and the basic differences between them. Knowledge of the historical development of survey procedures and practices.

Field Equipment & Operations (75 Qs): Knowledge of the care, cleaning and use of surveying tools and equipment, including field radios. Understand the names, purpose and parts, setup, transport and the need for calibration of various surveying field instruments. Some historical knowledge is required. Knowledge of the field duties of a Survey Technician such as line clearing, establishing points, taping, leveling, compass reading and basic types of surveying field notes.

Survey Control (6 Qs): Knowledge of types of survey control points and their differences.

Survey Computations (50 Qs): Knowledge of mathematics and measurements relating to surveying (including linear, angular, slope calculations, elevations and unit systems conversion).

Office Operations, Plan Reading and Preparation (34 Qs): Knowledge of the types of surveying maps and the ability to obtain basic information from these maps. Knowledge of basic drafting and CAD skills and procedures.

First Aid & Safety (20 Qs): Basic knowledge of treatment practices for a variety of medical emergencies. Knowledge of traffic control and safety procedures for surveying and construction operations, including Occupational Safety and Health Administration (OSHA) standards

Calculator policy

Selection of a calculator is an important part of CST exam preparation. Effective October 2022, the only models acceptable for use during the exam include: Casio fx-115 and fx-991 models; Hewlett Packard (HP) 33s and 35s; Texas Instruments TI-30X and TI-36X models.

The use of any device having a QWERTY keyboard / keypad during the exam is strictly prohibited. The following devices are also prohibited, whether or not they have a QWERTY keyboard / keypad function: Palmtop, Laptop, Tablet, Handheld or Desktop computers, Personal readers, Data Banks, Data Collectors, and Personal Data Assistants (PDA). Also, cell phones, cameras, scanners, video recorders or any other copying devices are prohibited.

Notwithstanding the above, the NSPS CST Board or its designees have the right to prohibit the use of any device which, in the opinion of the Board, poses a threat to exam security.

Visit
www.learncst.com/calculator-policy
for more details.

STUDY GUIDE & RESOURCES

To take advantage of the CST exam's open book policy, we advise students to procure a "study bundle" in addition to selecting at least one major surveying textbook similar to those that follow.



NEW FOR '23: CST STUDY BUNDLE

Visit our Website for Bundle Options
www.learncst.com/exam-bundle



**Elementary Surveying:
An Introduction to Geomatics,**
Fifteenth Edition - Ghilani, Charles D.



**Definitions of Surveying
and Associated Terms,**
NSPS, 2005.

ADDITIONAL OPTIONS:

Brown's Boundary Control and Legal Principals,

Robillard, Walter G., Wilson, Donald A., Brown, Curtis M.

Evidence and Procedures for Boundary Location,

Robillard, Walter G., Wilson, Donald A., Brown, Curtis M.

Surveying: Theory and Practice,

Anderson, James M., Mikhail, Edward M.

Land Development Handbook: Planning, Engineering, and Surveying,

Dewberry, Sidney O.

Land Surveyor Reference Manual,

Harbin, Andrew L.

Land Survey Systems,

McEntyre, John G.

Surveying with Construction Applications,

Kavanagh, Barry F.

PREPARATION IS YOUR RESPONSIBILITY

CST's open book exam policy tends to provide examinees a false sense of security. Past test results have shown that many examinees with extensive experience and, in some cases, even formal surveying education did not pass an examination.

The CST Exam sequence is a challenging, timed test. You must be prepared to move purposefully through up to four or more hours of testing. Study, review, and practice in the Work Element areas are important to prepare you for the questions. In the past, this review was left solely to the examinee. Learn CST helps examinees focus on each level's work elements, locate additional resources and plan for the exam more effectively.

ARRANGING YOUR EXAMINATION

LearnCST supports Fast Track students in arranging exam proctors and setting up examinations once per quarter (dates listed on page two). An exam fee of \$180 applies. Discounts are available to NSPS members, students, active military, groups, employers and more.