Spatem GeoTeck Private Limited

ISO 9001:2015 Certified | MSME Registered | StartupIndia Recognized

About Us

M/S Spatem GeoTeck Pvt. Ltd. (GeoTeck™) is an ISO 9001:2015 certified, MSME-registered, and StartupIndiarecognized company, providing comprehensive geospatial solutions. We are an authorized partner of world leading technology providers, including **Trimble** (www.trimble.com), **Hexagon Geospatial** (www.hexagon.com), **ideaForge** (www.ideaforgetech.com), **Planet** (www.planet.com), and **Agisoft Metashape** (www.agisoft.com). Additionally, we are the industrial partner of **Techno India University**, West Bengal (www.technoindiauniversity.ac.in) for offering an MSc program in Geospatial Science. GeoTeck is also an associate member of **Science and Technology Park, Pune** (www.scitechpark.org.in). We are the training partner of National Skill Development Corporation (NSDC) (www.nsdcindia.org), Govt. of India.

About the Course

Course Title:	Advanced Surveying with Total Station
Course Duration:	1 month, 2 days per week (60 hrs)
Course Timing:	9:00 AM to 5 PM
Course Fees:	Rs. 10,000/-
Certificate:	Certificate will be issued by GeoTeck after successful completion of the course
Eligibility:	(a) ITI in Surveying (b) Degree/Diploma in Civil Engg. or Surveying or RS-GIS (final semester students are also eligible) All participants are requested to carry their own laptop computer for their practice.

Surveying has evolved significantly with the advent of modern instruments, and the Total Station has become a cornerstone in precise land measurement and data collection. The “Advanced Surveying with Total Station” course is designed to equip students, engineers, and field professionals with in-depth theoretical knowledge and extensive practical skills in operating Total Station instruments for a wide range of surveying applications.

This course provides comprehensive training on the principles, components, and functionalities of Total Stations, with a strong emphasis on fieldwork, data recording, and post-processing using dedicated software. Participants will learn advanced techniques such as traversing, topographic mapping, stakeout operations, coordinate calculations, and integration with GIS and CAD platforms.

Through hands-on exercises, real-world project scenarios, and expert-led demonstrations, the course aims to bridge the gap between classroom learning and professional practice. By the end of the program, learners will be confident in executing complex survey tasks independently and contributing to high-accuracy geospatial data generation in sectors like construction, infrastructure development, land management, and environmental studies.

Whether you're upgrading your surveying capabilities or seeking to advance your career in geomatics, this course offers the tools and insights to master modern surveying methodologies with precision and efficiency.

Syllabus

Day-1

Introduction to surveying, survey fundamentals, understand the detailed concept of instrument and detail key function for topography, construction and engineering detail concept of various prism, non prism, interchanging prism and sticker prism

Day-2

Details of bench mark carry, TBM fixing, coordinate setting, contour, sketching the contour by software, cut & fill calculation overview, raw data analysis, datum fixing and volume from datum by different method and software analysis, contour in 3d overview, and field data analysis, spot level, square contour method, direct station orientation, resection

Day-3

TS fundamentals, types of TS survey: flat plane, inclined plane, non accessible plane; measuring chimney, measuring vertical height; alignment checking such as chimney, tower, crane; distance measurement, angle, bearing, azimuth, etc.; vertical angle measurement, direct-indirect method

Day-4

Point establishment, coordinate establishment by known or unknown data, grid line marking/checking, column position, cap position and fixing, centre line checking method, offset method, stakeout method, layout, pile marking, verticality checking

Day-5

Job setting, scale setting , FPS to CGS method, drawing interchange and data collection from drawing and field establishment, traversing, error distribution in industry standard procedure, topographical, engineering and construction survey, merging and extracting data, superimposing of drawing, road survey, embankment survey, boundary survey, slope determination, missing line measurement technique, remote elevation technique, COGO method, angle of repose technique, super elevation method

Day-6

Point projection method, line projection method, offset line, offset arc, curve setting, point calculation, jobs storage and deleting, collimation check, instrument check, optical plummet check, target system, all kinds of survey and survey related civil checking procedure, data note down method

Day-7

Full practical, case study, errors, all data combining

Day-8

Case study, data process, error distribution, final production and lab process

Our Faculties

Dr. Basudeb Bhatta, PhD in Engineering, GNSS/RS/GIS/CAD expert, DGCA certified drone pilot
Dr. Aditi Sarkar, PhD in Engineering, GNSS/RS/GIS Expert
Mr. Sankarsan Pramanik, AICTE approved Survey Engineer (construction, land survey, topography and mining expert), Executive Manager at Spatem GeoTeck Pvt Ltd, specialization in high-rise building, industrial project, land development and civil construction, embankment and jetty survey, topographical map making (worked in LnT construction, Shapoorji Pallonji, SIMPLEX, NGDCL, SRIJAN real estate, URBANA, EDEN real estate, SILVER SPRING real estate)
Mr. Arka Roy, B. Tech., DGCA certified drone pilot
Mr. Rahul Bhandari, GNSS/RS/GIS Expert, DGCA certified drone pilot
Mr. Projyal Das, GNSS/RS/GIS Expert, DGCA certified drone pilot

Admission

Admission:	First-come-first-serve basis, limited seats
Link for application:	Click here

Fees Payment

Once your application is accepted, details for the payment will be mailed to you. Upon completion of payment, your admission will be confirmed via email.