



Training Program:

**Design Of Transmission Lines, Structures, And
Foundations**

www.btsconsultant.com

Introduction:

This in-depth course will provide you with the latest criteria and practical techniques used in the design of transmission lines, structures, and foundations. You will learn transmission design concepts that use traditional methods and modern software, and participate in class design exercises.

Note: This course will include training on the PLS-CADD computer program.

Who Should Attend?

- Transmission line Engineers
- Electrical Engineering
- Civil Engineers
- Design and drafting technicians
- CAD technicians
- Surveyors

Course Objectives:

- Introduction to Power Transmission lines and its design proposals.
- Introduction to Towers, structures and Poles and their types.
- Conductor types and their selection according to Demanded Loads.
- Types of Insulators and their uses.
- Rout Survey and selection of Transmission Line routes.
- Introduction to sagging its importance and calculations.

- Selection of Power and Distribution Transformers
- Foundation design
- SOP of Transmission lines.

Course Outline

DAY 1

- Overview of Transmission Line Survey components
- Basics of Survey requirements for Line designing
- Advance Techniques to be followed during survey for the line designing in software
- Needed terrain data and surveying techniques
- Importance of Co-ordinate System during survey
- Needs to integrate and computerize all aspects of line design

DAY 2

- Terrain Data input and Modeling
- Input of Survey data to software environment
- Generate and edit feature codes data
- Preparing terrain model
- Generate, edit or import terrain models
- Create alignments, profiles and side profiles
- Attaching Route drawings and Images

DAY 3

- Line Design Criteria parameters
- Weather data, Wind zones and Conductor tension limits
- Conductor and tower automatic loading based on standards
- Conditions for automatic sagging
- Conditions for checking clearances
- Structure and Conductor Design and Modeling
- Various structures and conductor types
- Where to get structure and conductor data
- Structure and Conductor modeling
- Designing of structures and conductors

DAY 4

- Interactive Line Design
- Spot structures interactively
- Manual and Automated String and sag conductors
- Interactive line design and optimization
- Check clearances and Check overall design efficiency
- Modeling of lines crossing, Snap structures to surveyed points

DAY 5

- Generate Construction Documents
- Output Drawings, Tower Schedule, Stringing charts, etc.

- Export project data to other commercial databases and Google Earth
- Importing and Assessment of existing lines and options for upgrade.

Accreditation:

BTS attendance certificate will be issued to all attendees completing a minimum of 80% of the total course duration.