TVPPA / UTS Advanced Power Line Design & Staking Certification (Adv. PLDS)

UTS's 3-day Advanced Power Line Design and Staking Certification is intended as the next step for students who have completed the PLDS Core program. The advanced series was developed for stakers and engineers who are ready to learn more about the process and information necessary to assist in development of utility standards, design planning and equipment use and purchase decisions. The Advanced PLDS Certification requires PLDS Core Certification (as a pre-requisite), plus an additional 21 advanced course hours (total of 105 hours). Seminar guide provided. Proctored final exam through UTS eLearning site. Certification diploma issued upon successful completion of training and passing (70+) exam score.

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Topics in the 3 day advanced training include:

// Surveying Concepts for Line Design

- Horizontal measurements and ranging
- Vertical measurements and grading
- Mapping and GIS
- Surveying and GPS equipment
- Legal descriptions and ROW

// Conductor Mechanics for Line Design

- Principals of Conductor Mechanics
- The PLDS Process (how conductor sag and tension data and construction practices affect the design and outcome)
- Design Tension (calculations and decisions that rely on design tension, scale and precision, tensioning methods, uncontrollable variables)

- Worst Case Sag, min/max (calculations and decisions that rely on worst case sag, scale and precision, tensioning methods, uncontrollable variables)
- Data Tables (creation, formatting, publishing)
- Rules of Thumb for Larger Conductors (traditional and antiquated rules, organization specifics, formulation of modern rules)
- Joint Use Management Procedures (contractual requirements, NESC responsibilities, permitting processes)

// Structure Mechanics for Line Design

- Principals of Structure Mechanics
- The PLDS Process (how poles, equipment, soil conditions and construction practices affect the design and outcome)
- Critical Buckling Axial Ratings (PCR) (how pole class, construction grade, structure orientation type and unbraced column are accounted for in the PCR equation)
- Ultimate Resisting Moment Ratings (URM) (how wood species, pole class and pole setting depth are accounted for in the URM equation)
- Pole Wind Moment (MP) (how NESC Loading, equipment, pole size/class and setting depth affect wind loading on the pole)
- Pole Framing and Adders (determining standards for pole attachments and calculations based on spacing)
- Evaluating NESC strength of pole top components