

Fundamentals of Outside Plant Design: 5-Day Intensive

2027 00000 30 - 26
London (UK)

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Fundamentals of Outside Plant Design: 5-Day Intensive

2022-2023 **1987-1997** **1397-2025** **Location:** London (UK) **Fees:** 6100 GBP

Why This Course

Outside Plant OSP infrastructure forms the backbone of modern telecommunications networks, connecting buildings, campuses, and communities through reliable cabling systems. Designing and managing OSP networks requires a strong understanding of industry standards, installation methods, and effective planning strategies.

This intensive 5-day program provides a comprehensive introduction to OSP design principles and practical implementation techniques. Through a blend of theoretical learning and practical exercises, participants will develop the knowledge needed to design, plan, and support reliable outside plant networks in real-world environments.

What You'll Learn and Practice

By participating in this program, you will:

- Understand core OSP design principles and relevant industry standards.
- Develop skills in route selection and pathway design for underground, aerial, and direct-buried installations.
- Select appropriate cable types and apply proper installation techniques.
- Plan OSP projects including documentation, budgeting, and scheduling.
- Apply testing and troubleshooting techniques for OSP networks.
- Ensure compliance with safety and regulatory requirements.

The Program Flow

Day 1: OSP Fundamentals and Standards

- Introduction to outside plant design concepts and terminology.
- Understanding industry codes, standards, and regulatory requirements.
- Overview of OSP infrastructure components and network elements.
- Right-of-way considerations and permitting requirements.

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A graphic of a chessboard with several chess pieces (king, queen, rook, knight, and pawns) positioned on it. The board is white and black, and the pieces are gold and silver. The text 'UK Training PARTNER' is overlaid on the right side of the board.

Day 2: Underground and Direct-Buried Pathways

- Designing underground conduit systems and duct banks.
- Understanding maintenance holes, handholes, and vault structures.
- Methods for direct-buried cable installation.
- Introduction to trenchless technologies and horizontal directional drilling.

Day 3: Aerial Plant Design

- Principles of pole line design and load calculations.
- Types of aerial cables and support structures.
- Guying and anchoring techniques for stability.
- Clearance standards and safety considerations for aerial installations.

Day 4: Cable Selection and Network Planning

- Characteristics of copper and fiber optic cables.
- Cable sizing and capacity planning strategies.
- Selecting and placing splice closures.
- Designing network redundancy and route diversity.

Day 5: Project Planning and Implementation

- Preparing OSP project documentation and as-built drawings.
- Cost estimation and budgeting for infrastructure projects.
- Construction management and quality control practices.
- Testing, acceptance, and maintenance procedures.

Individual Impact

- Develop strong technical knowledge of outside plant infrastructure design.
- Improve the ability to plan and manage OSP projects effectively.
- Gain confidence in selecting appropriate components and materials.
- Strengthen troubleshooting and maintenance skills for OSP networks.

Work Impact

- Improve reliability and performance of telecommunications infrastructure.
- Enhance planning and execution of OSP network projects.
- Ensure compliance with industry standards and safety practices.
- Support efficient network expansion and maintenance operations.

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A graphic illustration of a chessboard with several chess pieces. A large gold king piece is prominent in the foreground, with a silver pawn and a gold pawn nearby. The background features concentric circles, suggesting a signal or network.

Training Methodology

The program combines technical instruction with practical application to ensure participants gain real-world skills. Learning methods include:

- Instructor-led technical demonstrations and discussions.
- Case studies based on real OSP design scenarios.
- Hands-on exercises in pathway planning and network design.
- Group problem-solving activities and technical reviews.
- Practical tools and templates for OSP documentation and planning.

Beyond the Course

By the end of the program, participants will be able to:

- Design complete OSP network pathways and infrastructure systems.
- Select appropriate cables and installation methods for different environments.
- Manage OSP projects from planning through implementation.
- Maintain and troubleshoot outside plant networks effectively.

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A graphic illustration of a chessboard with several chess pieces. A large gold king piece is prominent in the foreground, with a silver pawn and a gold pawn nearby. The board is checkered, and there are concentric circles in the background.