CORE CONCEPT

Submarine Telecom Cable Systems Course: Landing Stations, Route Survey, Installation and Repair

30 November – 4 December 2026
Dubai - Five-star CBD venue

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Ref: 2116_30673 **Date:** 30 November – 4 December 2026 **Location:** Dubai - Five-star CBD venue **Fees:** 21450 SAR

Introduction:

Submarine telecom cable systems, from landing stations and route survey to installation and repair, are the subject of this 1-week course for carrier, data-centre and wholesale capacity units, ending with a Cable Landing and Maintenance Readiness Plan for a case organisation. Landing projects stall on survey gaps, crossing disputes and permits, and outages stretch when no repair ship, spare cable or power safety procedure is ready. Nominees already manage transmission, landing station or capacity work and apply each day through case studies on survey reports and maintenance agreements. CoreConcept Training Center delivers this submarine telecom cable systems course.

Course Objectives:

- Map a submarine cable system from terminal equipment and power feed through repeaters and branching units to the wet plant armour sections
- Specify landing station, beach manhole and shore end requirements, including power feed arrangements and physical security
- Commission a desktop study and marine route survey and review route position lists, crossing proposals and permit needs
- Oversee cable lay, plough burial and post-installation protection using load and lay reports and cable awareness charts
- Organise fault response with repair ships, spare cable and power safety procedures under a zone or private maintenance agreement
- Compare consortium, private and IRU capacity models and the operations and maintenance cost each one carries

Target Audience:

- International network planning units responsible for new cable systems, landing options and fibre pair requirements
- Cable landing station and data-centre operations units responsible for terminal equipment, power feed and site security
- Wholesale and international capacity units responsible for IRU sales, purchases and consortium shares
- Network operations units responsible for submarine fault response and restoration routing
- Marine project and engineering units responsible for survey contractors, permits and installation oversight

Course Outline:

Day 1: Submarine Cable Landscape and Current-State Review

- Submarine Cable System Architecture From Landing Station to Wet Plant
- Repeatered Versus Unrepeatered Links and Typical Span Choices
- Cable Armour Types From Lightweight Deep Water to Double Armoured
- Consortium, Private and Hybrid Ownership With IRU Capacity Models
- Existing Route and Landing Station Inventory for Gap Review

Day 2: System Design, Terminal Equipment, Power Feed and SDM Architecture

- SLTE Transponders, ROADM Placement and the Open Cable Concept
- Beach Manhole, Shore End and Landing Station Physical Security
- Power Feed Equipment, Feeding Arrangements and Virtual Earth Point
- Erbium-Doped Fibre Amplifier Repeaters and Fibre Pair Count Planning
- SDM Cable Designs and Branching Units for Multi-Landing Topologies

Day 3: Desktop Study, Marine Route Survey, Permits and Installation

- ICPC Desktop Study Minimum Requirements and Route Engineering Inputs
- Marine Route Survey Acquisition With Bathymetry and Seabed Sampling
- ICPC Crossing Criteria With Oil Pipelines and Power Cables
- Permit Register for Territorial Waters, Shore End and Foreshore Works
- Cable Lay, Plough Burial and Jetting With Lay Reports

Day 4: Cable Faults, Repair Operations and Maintenance Agreements

- Fault Causes From Trawling, Anchors and Turbidity Currents Reviewed
- Shunt Fault and Fibre Break Location From the Terminal Station
- Power Safety Procedures Between Repair Ships and Terminal Station Staff
- Repair Ship Operations With Grapnel Selection, Final Splice and Bight
- Zone Maintenance Agreements Versus Private Repair Vessel Contracts

Day 5: Case Study on a Cable Landing and Maintenance Readiness Plan

- Case Landing Station Site Review and Power Feed Check
- Case Route Survey Findings and Crossing Agreement Plan
- Case Fault Response Sequence With Spare Cable Holding
- Case Capacity Model Comparing IRU, Lease and Consortium Share
- Cable Landing and Maintenance Readiness Plan Completion and Peer Defence

Skills You Will Gain:

- Submarine System Architecture Review
- Landing Station Readiness Assessment
- Desktop Study Evaluation
- Route Survey Interpretation
- Cable Burial Planning
- Submarine Fault Response Coordination
- Maintenance Agreement Selection
- Capacity Contract Analysis

Why Attend This Course:

- Present a Cable Landing and Maintenance Readiness Plan to the head of international networks and the wholesale capacity director
- Decide which route option, burial approach and maintenance arrangement suits a new or existing cable landing
- Avoid survey rework, crossing disputes and long outages caused by missing repair ship cover or spare cable
- Equip colleagues with the desktop study checklist, crossing register and fault response sheet used in class

Conclusion:

Back at work, the participant hands the head of international networks and the wholesale capacity director a Cable Landing and Maintenance Readiness Plan covering the landing site, route survey findings, crossing and permit register, burial approach, repair ship cover and capacity model. Planning uses it to choose a landing option, operations to prepare fault response and the commercial unit to price capacity. After the first cable fault or survey campaign, the unit should compare repair time, spare cable use and permit delays with the plan and revise it.

Frequently Asked Questions FAQ:

What should participants know before a submarine telecom cable systems course?

Participants should already work with transmission networks, landing stations or international capacity and understand basic optical transmission. Bringing an anonymised route position list, survey report, maintenance agreement or capacity contract lets them apply each case study to their own landing.

How does a submarine telecom cable systems course differ from a fibre splicing and OTDR course?

It covers the subsea system as a whole: wet plant, power feed, landing stations, marine survey, burial, repair ships, maintenance agreements and capacity contracts. A terrestrial fibre course trains field splicing, connector work and trace testing on land routes and does not cover marine operations.

Why does burial depth matter for submarine telecom cable systems?

Burial protects the cable from fishing gear and anchors, which cause most faults in shallow water. Burial by plough or water jetting sharply reduced fault rates, so the route survey must confirm seabed conditions that allow the planned burial along the shelf.

What do participants take back from a submarine telecom cable systems course?

Participants take back a Cable Landing and Maintenance Readiness Plan for a case organisation, with a landing station review, survey and crossing register, fault response sequence and capacity model comparison ready to adapt to their own cable landings.