



# Koinonia Academy



# OPTICAL TRANSPORT NETWORKS

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## Course Overview:

Optical Transport Networks are composed of a set of Optical Network Elements connected by optical fiber links to provide functionality of transport, multiplexing, routing, management, supervision and survivability of optical channels carrying client signals. The Optical Transport Networks is designed for current and future protocol – standardized by ITU.

On completion of this course, you will be able to understand the basic composition and application of the OTN network with G.709 interfaces.

Will be able to identify the features, functionality, architecture, and building blocks of OTN systems.

## Course Objectives:

- Understand the architecture, signal structures, and multiplexing principles of Optical Transport Networks based on ITU-T standards
- Explore the various levels of Optical Channel Transport Units (OTUs) and Transport Lanes
- Gain comprehensive knowledge of the complete overhead of the Optical Transport Module (OTM)
- Learn how to manipulate OTN parameters and set up OTN configurations
- Execute OTN measurements and test applications
- Evaluate results and interpret criteria for alarms and errors
- Enhance problem-solving skills through discussions on different network configurations and error scenarios
- Covers non-linear effects and dispersion characteristics (CD and PMD) to provide a comprehensive understanding of the underlying physical processes.

## Target Audience: This course is designed for

- Communication and Network Engineers.
- Those who wish to become Optical network associates.
- ICT Professionals or students interested in Optical Transport Networks