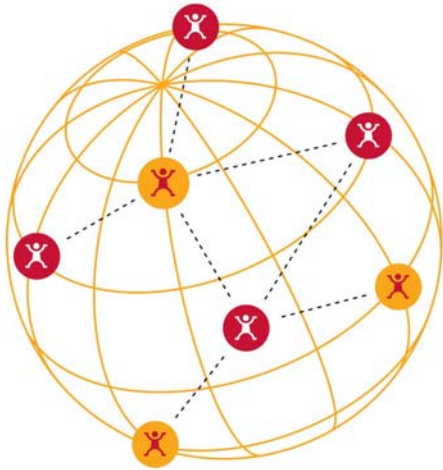


## TRAINING PROGRAM OUTLINE



### ENG-101E NETWORK PLANNING & MANAGEMENT

#### DESCRIPTION

A 10-day training program to provide participants with the knowledge, skills and tools to plan, develop and maintain efficient networks.

#### OBJECTIVES

- Give an overall view of the processes and typical tasks in network planning, development and management
- Present the modeling and characterization of services that is required for network planning activities
- Describe the major network architectures
- Provide the traffic characterization needed for the overall modeling, planning, development and management of networks
- Present the quantifiable aspects of quality of service needed to satisfy customer requirements
- Describe the types and sources of data required for network planning

- Provide the various models, methods and planning tools used in telecommunications network planning, development and management to maximize the revenues over the coming years, for all services

## TOPICS

- Overview of network planning
  - Review of requirements
  - Typical processes and tasks
  - Relationship between types of planning
- Network technology and design
  - Network architectures and technology
  - Core network technologies
  - Access network technologies
  - Design criteria for core and access networks
- Service definition and forecasting
  - Service definition and characterization
  - Mapping to customer segments
  - Forecasting
  - Bundling
- Data gathering and traffic characterization
  - Data gathering
  - Traffic characterization
- Traffic concepts and quality of service
  - Terminology
  - Traffic engineering concepts
  - Dimensioning
  - Grade of Service (GoS)
  - Quality of Service (QoS)
  - Security
  - Service Level Agreements (SLA)

- Network costing and optimization
  - Telecom investments
  - Economic modelling and business plans
  - Optimization criteria and procedures
  
- Network deployment and project planning
  - Fundamental concepts
  - Strategic phase of project planning
  - Project management
  - Engineering and procurement
  - Site work
  - Acceptance and commissioning
  
- OSI management framework
  - OSI reference model
  - Shortcomings of the ISO model
  - OSI Management standards
  - System overview
  - OSI management functional areas
  - Evolution of standard for Next Generation Networks
  
- Overview of network management
  - Introduction
  - Network management models
  - Network management protocols
  - Network Operation Center (NOC)
  
- Network management tools
  - Bit Error Rate (BER) tester
  - Management Information Base (MIB) tools
  - Protocol analyzer
  - Commercial NMS products
  - Integrated NMS tools and trends

## TARGET AUDIENCE

- Telecommunications managers and personnel responsible for network planning, development and management
- Managers looking to complement their skill-set by gaining a good understanding of network planning, development and management concepts

## METHODOLOGY

Our Training Programs combine expert presentations, workshops, case studies and discussions on real-life situations faced by participants. Complete training material is provided to all participants for future reference and follow-up action plans.

## LOCATION

Our Training Programs are held at regular intervals in selected cities around the world. Upon request, our expert trainers can lead Training Programs at the location of your choice. If interested, please contact us at [training@neotelis.com](mailto:training@neotelis.com).

## EXPERTISE

Neotelis provides consulting and training services to telecommunications organizations worldwide. Its team of experts has trained thousands of executives and managers working for operators, regulators, policy-makers and governments in over 100 countries around the world.

