



## ET 2.0: Telecommunications Technical Curriculum (TTC)

### Program 4: Data Knowledge

### Course 4: Transport and Application Services Layer Concepts

#### PROGRAM OVERVIEW

The ExperTech 2.0 series is a library of CD-ROM or intranet-based products covering key communications topics. Seminar style presentations provide telecom professionals with easy access to the information they need. Topics are presented by Hill Associates instructors renowned for their technical expertise, industry experience, and outstanding presentation style.

The *Telecommunications Technical Curriculum (TTC)* has a total of five programs, each of which consists of one or more courses. TTC is a modular, yet comprehensive program designed around the needs of those who want the details but cannot attend a more traditional classroom-based, leader-led program.

*Program 4: Data Knowledge* is a five course series that deals with concepts and terminology related to data services. In this fourth course of the series, *Transport and Application Services Layer Concepts*, we provide an overview of the top two layers of the modern data networking model. You will explore concepts such as connectionless and connection-oriented, error correction and detection, the client/server relationship, and peer-to-peer relationships. You will also examine several Transport Layer and Application Services Layer protocols, such as UDP, TCP, HTTP, FTP, RTP, TLS, and DNS.

*Program 4, Course 4: Transport and Application Services Layer Concepts* runs 90 minutes, and includes six lessons of audio, interactive elements, review slides, section knowledge checks, and a final exam. The participant can expect to spend about twice this amount of time to complete the course.

This program has three primary objectives:

- Discuss and explain the Transport and Application Layers, including their role and relationship in the modern five-layer networking model
- Explore details underlying IP addressing, routing and CoS/QoS
- Examine the details and benefits of an MPLS network structure

Specific topics can be developed, or packaged together to create a unique and customizable curriculum. All of our standard titles are available for preview at our store ([www.hill.com/store](http://www.hill.com/store)).

#### About Hill Associates

At Hill Associates, we excel at creating custom talent development programs. Our experts help identify and assess your needs, and create training and educational programs that exactly meet those needs. Though we specialize in information technology, we've strengthened companies and organizations in a wide range of industries for over 25 years. Let us help you create a world-class talent development program that moves your business forward.

#### PROGRAM OUTLINE

##### Lesson 1: Overview of the Transport Layer

- Explore the primary function of the Transport Layer, end-to-end communication, and what this responsibility entails

##### Lesson 2: Transport Layer Concerns

- Examine other Transport Layer functions including connection-oriented and connectionless operations, error detection and correction, identification of application services, and flow control
- Explore security and timing considerations

##### Lesson 3: Example Transport Layer Protocols

- Identify and describe four common examples of Transport Layer protocols: UDP, TCP, Real-time Transport Protocol (RTP), and Transport Layer Security (TLS)

##### Lesson 4: Overview of Application Services Layer

- Explore the primary function of the Application Services Layer, providing standardized services for application communication

##### Lesson 5: Application Services Layer Roles and Relationships

- Discuss information syntax and semantics
- Explore client / server roles and relationships

##### Lesson 6: Example Application Services Layer Protocols

- Describe DNS, FTP, Telnet, SMTP, HTTP, SNMP and IM protocol details and roles