



Fundamentals of Wireless for the New Millennium

PROGRAM OVERVIEW

The future of enterprise networks will center on integrating wired networks with wireless networks. This course begins with an overview of the wireless market with emphasis on wireless data. The next set of topics covers the fundamentals of radio-based networks and the multiple access air interfaces used in contemporary wireless networks. The major wireless network implementations (GSM, cdma, and LTE) are explained and compared. The basic concepts of open systems interconnection and layered architectures are discussed using the Internet protocol suite (TCP/IP) as an example. The course also develops the relationships between wired and wireless network architectures.

This three-day, classroom-based, leader-led course is intended for those seeking a solid foundation in wireless network concepts. It is recommended for telecommunications professionals involved in the sale or implementation of wireless network products or services, IT staff building or managing wireless voice and/or data networks, industry consultants designing wireless networks or providing wireless network services, or managers or other professionals wanting a greater understanding of wireless networks, technologies, and applications.

The program has five primary objectives.

- Explore the technical and competitive challenges faced by wireless providers given the convergence of data and wireless networks
- Describe how wireless data communications will affect the use of information technology by companies or vertical industries
- Explain the importance of layering and how the OSI Reference Model relates to the reality of TCP/IP and mobile IP
- Compare and contrast wireless circuit and packet switching technologies and their applications
- Describe the basic components of a wireless network

Hill Associates can customize this program to address your specific Sales Engineering talent development program goals. We will work with you to identify the specific technologies and solutions you wish to discuss, to understand your particular competitive market, and develop case studies that focus on unique challenges facing your customers.

About Hill Associates, Inc.

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: The Wireless Market

- An overview of the wireless marketplace, the trends, and future outlook

Lesson 2: Wireless Radio Fundamentals

- Explore the basics of radio, including electromagnetic waves, spectrum usage, basic radio systems, modulation techniques, radio channels, propagation anomalies, and multiple access techniques

Lesson 3: Mobile Architecture

- Explain spectrum reuse and how antennae function in mobile systems
- Identify and explain mobile network components

Lesson 4: Mobile Access Technologies

- Explain multiple access techniques including GSM, CDMA, LTE, and the path to future 4G access

Lesson 5: Overview of Contemporary Wireless Networks and Operations

- Identify and explain mobile operations, including vocoder technology, handoffs, roaming, signaling, and management functions

Lesson 6: Messaging and Wireless Data

- Explore the importance of network standards and layering within mobile networks
- Discuss the details associated with paging, SMS, smartphone capabilities, and the future of mobile data