

Course ID
WCET2
Course Duration
3 days

Course Title
**Review of Select Topics Included in IEEE WCET Exam:
Wireless Access, Network Architecture, Management,
Security, Facilities, and More**

**Related
Courses**

- Wireless Technologies: A Comparative Study (COMPARISON, 2-4 days)
- GSM: Network Architecture, Operation, and Design (GSM-I, 5 days)
- GPRS: Network Architecture, Operation, and Design (GPRS, 3 days)
- EDGE: Network Architecture, Operation, and Design (EDGE, 2 days)
- UMTS-FDD: Network Architecture, Operation, and Design (UMTSFDD, 3 days)
- UMTS-TDD: Network Architecture, Operation, and Design (UMTS-TDD, 2 days)
- HSDPA: Network Architecture, Operation, and Design (HSDPA, 2 days)
- HSUPA: Network Architecture, Operation, and Design (HSUPA, 2 days)
- CDMA Technology and Its Evolution to cdma2000 (CDMA, 3 days)
- 1xRTT: Network Architecture, Operation, and Design (1XRTT, 2 days)
- 1xEVDO: Network Architecture, Operation, and Design (EVDO, 3 days)
- WiMAX and Mobile WiMAX: An Advanced Tutorial Including 802.16e (WIMAX-TECH, 3 days)
- LTE/SAE: A Technology Overview (LTE-TECH, 3 days)
- CompTIA Network + Certification Training (NETWORK+, 5 days)
- SNMP Essentials: A Fast-Track Tutorial (SNMP-ESSENT, 3 days)
- IP-Based Systems: TCP/IP and Mobile IP (IPSYS, 2-3 days)
- Multimedia Applications: IMS, SIP, and VoIP (MULTIMEDIA, 2 days)
- VoIP: Protocols, Design, and Implementation (VOIP, 2-3 days)

Aimed At

Wireless telecommunications professionals and managers, consultants, engineers, and others involved in designing, implementing, or maintaining mobile and fixed radio systems and those who would like to review and clarify certain topics included in the IEEE WCET curriculum.

Prerequisites

Those wishing to take this course should have a basic knowledge of wireless, TCP/IP, physical support structures and networking.

**Course
in a Nutshell**

This fast-paced course covers wireless access technologies, network service architecture, network management and security, facilities infrastructure, agreements, standards, policies, and regulation, and more. This is one of a pair of courses tied to the IEEE WCET Examination and intended for those who wish to use the WCET curriculum as a guide for their professional development. While not specifically offered as certification prep course, it will help you review and practice some of the major topics covered by the exam.

Customize It!

The course can be customized to satisfy specific knowledge areas relative to job performance or other customer goals. We can adjust the topics and level of details to suit your audience, whether engineers, technician or managerial personnel. For those interested in in-class hands-on exercises, the course can be optionally taught as a four-day workshop.

Learn How To

- Describe the evolution of wireless networks through 3G and beyond
- Grasp the transition from circuit-switched to packet-switched networks
- Understand the basics of network management
- Explain important aspects of facilities infrastructure

**Course
Outline**

- Introduction: Wireless Access Technologies
 - Mobility Management
 - Wireless Access Technology Standardization
 - Digital Mobile Cellular Technology Evolution: 2G and 3G
 - PANs, LANs, MANs
 - Beyond 3G
- Network Service Architecture
 - Circuit-Switched Cellular Network Architecture
 - TCP/IP in Packet-Switched Networks
 - VoIP/SIP for IP Multimedia
 - Packet-Switched Mobile Networks and IMS
 - Mesh and Mobile Ad-Hoc Networks
 - Service Frameworks
- Intro to Network Management and Security

- Information Technology Infrastructure
- Enhanced Telecommunications Operations Map
- SNMP
- Security Requirements
- Facilities Infrastructure
 - AC and DC Power Systems
 - Electrical protection
 - HVAC
 - Equipment Racks, Related Hardware
 - Tower Specifications and Standards
 - Distributed Antenna Systems, Base Station Hotels
 - Physical Security, Alarms, Surveillance
 - National and International Standards
- Agreements, Standards, Policies and Regulations
 - Agreements
 - Standards
 - Policies
 - Regulations
- Some Key Knowledge Areas
 - Communications Networks
 - Other Communications Systems
 - General Engineering, Management and Economics
- Wrap up: Course Recap and Discussion

How You Will Learn

- A seasoned wireless expert and instructor will present this course in interactive lecture format.
- Along with the lecture, we will use activities to enrich the instruction and drive home the essential points. The course can be optionally taught as a four-day hands-on workshop.
- If you already know something about the covered technologies, we will build on that knowledge. We'll compare and contrast what's familiar with what's new, making the new ideas easier to learn as well as more relevant.
- You will receive a Participant Handbook which will help you remember and retain what you learned in class and apply it on your job.

Revised

Dec. 23, 2009f