
UBWA - UBWA - Ubiquiti Broadband Wireless Admin

Overview

Course Code	UBWA	Duration	2.0 days
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The Ubiquiti Broadband Wireless Admin course is a two-day, in-class training course that teaches the most important concepts in Outdoor Wireless Networking, with special emphasis on how to design, build, manage, and troubleshoot WISP networks. Course materials & lab activities teach with airOS-8 using airMAX AC equipment.

Details

RF Theory

- Frequency vs. Propagation
- Unlicensed Bands
- OFDM Spectral Masks
- Licensed Frequencies
- Decibels in RF Systems
- Free Space Path Loss
- EIRP
- Line of Sight & Fresnel Zones
- Link Power Budgets
- Fade Margin

Radio Operation

- Standard RF Circuit
- Carrier Signals
- Radio Sensitivity
- Radio Selectivity
- Signal, Noise & Interference
- Chains, Data Rates & MIMO
- Thermal Noise
- Channel Flexing
- airPrism Technology
- Modulation, EVM & Data Rates

Antenna Theory

- What is Gain?

- Isotropic Radiators
- Antenna Function
- Gain, Efficiency & VSWR
- Gain, Surface Area & Directivity
- Polar Plots
- MIMO, Polarization & XPD
- Types of Antennas
- Antenna Alignment
- Downtilt, Lobes & Nulls

Ubiquiti Service Providers

- TDMA & airMAX Protocol
- 802.11, CSMA/CA & Indoor
- Problem of Hidden Node
- airMAX-AC, airOS-6 & -8
- Traffic Shaping & Burst
- Scalability vs. Performance
- Security & VLANs
- airFiber Technology & Protocols
- airOS Tools & Redundancy
- Bridged vs. Routed ISP