

## **PROGRAMMA Ubiquiti Broadband Wireless Admin (UBWA)**

**16 ore**

### **Parts I: 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

### **Parts II: 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

### **Parts III: 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

#### **Parts IV: Ubiquiti Service Providers**

TDMA & airMAX Protocol  
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