

# Spectrum Fundamentals

## *One Band at a Time*

### COURSE OVERVIEW

Frequency bands and spectrum are at the center of Mobile Broadband Eco-system. "Spectrum Scarcity" is a known issue and yet it is often misunderstood. This course will provide an overview of key aspects of spectrum bands – auctions and allocation, coverage vs capacity, propagation, and future-readiness.

Different types of spectrum bands (low-band, mid-band, and mmWave) and recent spectrum auctions (CBRS, C-band, mmWave for 5G) are summarized. The course also helps understand how the selection of frequency bands affects the design of multiband cell sites (Macro and Indoors). Other topics include overview of unlicensed bands for Wi-Fi and future bands for 6G.

### KEY TAKEAWAYS

- What is Spectrum? Why is it important?
- Types of Frequency Bands: Low-band, Mid-band, mmWave Bands
- Coverage and Capacity; Bands currently in use for 4G and 5G
- Licensed Vs Unlicensed Spectrum
- History of Spectrum Auctions: Role of ITU, FCC, and NTIA - Recent Developments
- CBRS band, C-band, mmWave Bands
- Future bands for 6G



### COURSE INCLUDES:

- ✓ Course outline
- ✓ Online access to self-guided PowerPoint deck
- ✓ Certificate of completion

### INTENDED AUDIENCES:

- ✓ All Telecommunication Job Types

### LIVE INSTRUCTOR-LED TRAINING HOURS:

2 Hours

### PREREQUISITE:

None