

## **The Art and Science of Ultrawideband Antennas**

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The imminent wide scale commercial deployment of ultrawideband (UWB) systems has led to increased interest in UWB antenna design. The requirements imposed by UWB systems place stringent demands on UWB antennas. For instance, the spectral and impedance matching properties of a UWB antenna exert a profound influence on an overall UWB system design. A well-designed UWB antenna can contribute to system performance by notching out undesired frequencies and controlling roll-off at the end of the operating bands. Thus UWB practice requires a holistic approach to system and antenna design.

This course is intended for RF engineers, technologists, and managers to become familiar with the foundation of a UWB wireless system — the antenna. The course topics include:

**History:** A history of UWB antennas from Hertz and Marconi to the present day

**Fundamentals:** Antenna fundamentals and how they apply in the UWB limit

**Taxonomy:** A taxonomy of UWB antennas exploring the wide variety of potential designs

**Antennas in Systems:** how antenna behavior contributes to the successful implementation of a UWB wireless system.

This course will allow you to:

Select the proper UWB antenna for your application

Integrate these antennas in a wireless system

Quickly and correctly apply UWB antennas to current projects