

Dates

Wednesday 22 July 2020
Wednesday 29 July 2020

10.00am-12.00pm (AEST)
10.00am-12.00pm (AEST)

Course length

4 hours (2 x 2-hour sessions)

Delivery method

Online

Pricing

\$700 + GST

Prerequisites

NIL. This course is designed for students (individual) new to the radio/critical communication industry.

Course Objectives

This course introduces the student to radio transmissions and antenna fundamentals. Modules include an overview of radio transmission and how transmitters and receivers work, an overview of wave propagation and radio antenna systems. Students will acquire a basic understanding of antenna systems theory.

COURSE OUTLINE

Introduction to Radio Transmission

- What is radio communication
- Frequency bands
- Broadband vs narrowband
- Attenuation and noise
- Measurement and the decibel

Understanding Radio Equipment

- Radio transmitters
- Carriers & modulation
- Radio receivers

Radio Wave Propagation

- Maxwell & Waves
- Wave attenuation
 - Free space loss and absorption
 - Reflections & multi-paths
- Radio horizons

Radio Antenna Systems

- How antennas work
- Antenna types
- Antenna gain & bandwidth
- Antenna polarisation
- Antenna resonance
- Transmission lines
- Common antenna configuration
- Grounding overview
- Antenna testing