

Course Title: Transmission Line Theory & Practise for RF and Microwave Apps

Course Code: EEA 195

Course Background / Summary:

Transmission lines are fundamental components in the realm of RF and microwave engineering, playing a crucial role in the efficient transfer of electromagnetic signals. Understanding transmission line theory and its practical applications is essential for professionals working in communication systems, radar technology, wireless networks, and more. This course provides participants with a comprehensive understanding of transmission line principles and their application in RF and microwave engineering.

Course Objectives:

- Grasp the significance of transmission line theory in RF and microwave engineering.
- Understand the behavior of electromagnetic signals in transmission lines.
- Learn techniques for impedance matching, signal integrity, and signal propagation.
- Acquire skills in designing and analyzing transmission line structures for RF and microwave applications.

Target Audience:

- RF and microwave engineers seeking to deepen their understanding of transmission line theory.
- Communication system designers interested in optimizing signal propagation and integrity.
- Antenna engineers aiming to enhance their knowledge of transmission line matching and design.

Course Duration: 3 Days

Course Contents

1.0 Importance and Applications in RF and Microwave Engineering

4.0 Impedance Matching Techniques

2.0 Electromagnetic Signal Behavior in Transmission Lines: Reflection

5.0 Signal Integrity Considerations

3.0 Transmission Line Parameters

6.0 Transmission Line Design and Analysis