

NOC: Basic Tools of Microwave Engineering - Video course

COURSE OUTLINE

The course will introduce three basic tools of a microwave engineer viz. smith chart, s-parameter and signal flow graph. The lectures would try to emphasize the need to understand the key concepts behind these tools for solving various analysis and design problems in microwave engineering. The concepts of microwave measurement both in the traditional microwave bench and network analyzer would be explained and some typical applications of the tools like impedance matching, network analyzer calibration, and directional coupler characterization would be demonstrated. The course would lay the foundation for further exploring the vast area of microwave engineering analysis and design.

COURSE DETAIL

Week .No	Topic
1	Challenges of microwave design and how Smith Chart can be used to find unknown impedance
2	Impedance matching network design
3	Equivalent voltage and current concept at microwave frequency and s-parameters
4	Signal flow graph, problem solving with s-parameters and signal flow graphs



NP-TEL

NPTEL

<http://nptel.ac.in>

Electronics & Communication Engineering

Pre-requisites:

Basic Knowledge of Electromagnetic Theory, Transmission line, Electronic network theory

Hyperlinks:

<http://www.ecdept.iitkgp.ernet.in/index.php/home/faculty/amitabha>

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