



BASIC ELECTRIC CIRCUITS

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INTENDED AUDIENCE : Students Belonging to Electrical Engineering, Electronics Engineering and those students for whom Basic Electrical Circuits course is compulsory core course.

INDUSTRY SUPPORT : All companies working in electrical engineering area.

COURSE OUTLINE :

This course offers comprehensive knowledge about the basic electrical circuits. This is considered to be the foundation course for the electrical and electronics engineers.

ABOUT INSTRUCTOR :

Prof. Ankush Sharma has around 20 years of teaching, consultancy, and R&D experience. He has worked in TCS, Wipro, and IIT Bhubaneswar at various capacities, before joining IIT Kanpur.

COURSE PLAN :

Week 1: Basic Circuit Elements and Waveforms

Week 2: Mesh and Node Analysis

Week 3: Network Theorems -1

Week 4: Network Theorems -2

Week 5: First Order and Second Order Networks

Week 6: The Laplace Transform and Its Application

Week 7: Circuit Analysis Using Laplace Transform

Week 8: Twoport Network

Week 9: Sinusoidal Steady State Analysis -1

Week 10: Sinusoidal Steady State Analysis -2

Week 11: State Variable Analysis

Week 12: Analogous Systems