



Electrical Fundamental Series (8 NERC CE Hours)

Overview

This series will provide you with an overall understanding of Electrical Fundamentals including Ohms Law, AC Circuits, Transformers and Three Phase Systems.

Program Segments

7101 Basic Electricity (2 NERC CE Hours)

The objective of this first course in the series is to provide an introduction to the theory of electron flow, and thence to current flow in an electric circuit. Various circuit configurations and calculations are presented utilizing Ohms law. A brief overview of magnetism and magnetic fields is also discussed particularly in its relation to electricity and magnetic induction.

7102 Properties of AC Circuits (2 NERC CE Hours)

The objective of this course is to present the fundamental characteristics of AC Circuits, including AC voltage generation, the effect of inductance and capacitance and the significance of power factor.

7103 Power and Power Factor (2 NERC CE Hours)

The objective of this course is to continue the analysis of AC circuits through application of the impedance triangle, the voltage triangle and the power triangle. Additionally, an introduction to the function and features of transformers is presented.

7104 Three Phase System (2 NERC CE Hours)

The main objective of this course is to examine the characteristics of three-phase systems and to look at the meaning of 'synchronism' and the requirements for paralleling generators. detection & reporting.