

Course Overview:

This general introductory course provides some basic engineering concepts needed to understand how a power plant works, followed by a general overview of coal-fired power plant layout and operating principles. All major systems in the power plant will be discussed all the way from coal handling to the generation of electricity. Relationships between power plant systems will be illustrated. Focus will be on simple presentation of complex engineering ideas, so attendees are not required to have an engineering or scientific background.

Course Objective:

- Increase personnel productivity
- Apply life cycle cost and risk planning at facility assets
- Target maintainability and reliability in the development of facility maintenance plans
- Understand how to decide rationally what maintenance activities to outsource and what is not
- Understand the different types of maintenance contracts
- Learn how to define service levels and monitor the contractor performance
- Learn how to develop a maintenance contract
- Recognize the pitfalls
- Understand how to evaluate the delivered performance of all parties involved

Course Outline:

- Introduction
- Power Plant Concepts
- Simple Power Plant
- Basic Energy Conversion
- Transferring Heat To Steam Energy
- Converting Steam Energy To Mechanical Energy
- Converting Mechanical Energy To Electrical Energy
- Heat And Energy
- Combustion Basics
- Handling Of Combustion Air And Flue Gas
- Combustion Heat Transfer
- Power Plant Electrical Primer
- Power Plant Alternating Current (Ac) Generators

Who Should Attend:

- Generation dispatchers who need a basic understanding of coal-fired power plant operation
- Regulators, communications staff, and others who need a basic understanding of coal-fired power plant operations
- Anyone who want to update himself on reliability, maintenance
- Anyone who have been assigned the responsibility to develop a maintenance strategy

Training Language:

EN / AR

Training Methodology:

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion
- Participatory Exercise
- Action Learning
- Class Activities
- Case Studies
- Workshops
- Simulation