MERCURY

Smart Grids for Non-Engineers Course

6 – 10 September 2027
Casablanca (Morocco)



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Ref: 9308_310879 **Date:** 6 – 10 September 2027 **Location:** Casablanca (Morocco) **Fees:** 4900 Euro

Introduction:

Consumers demand a safe, secure, and reliable grid system. With the introduction of system digitalization, the demand for a smart grid is no exception. A smart grid is an intelligent automated system for monitoring the flow of electricity and making the distribution of electricity more efficient.

In a world where protecting the environment is a significant concern, it is important to find cost-effective ways of reducing power usage and increasing energy independence. A smart grid includes the utilization and production of renewable energy. Consumers now have a choice to generate their electricity for personal consumption, and an excess of electrical energy can be sold to the local utility supply companies.

This course on smart grids for non-engineers can be achieved by installing smart meters on the premises. Smart grids possess demand response capacity to help balance electrical consumption with supply and the potential to integrate new technologies to enable energy storage devices and the large-scale use of electric vehicles.

Targeted Groups:

- Non-engineers
- Administrative personnel
- Safety officers
- Maintenance technicians
- The general professional public

Course Objectives:

At the end of this smart grids for non-engineers course, the participants will be able to:

- Understand the role and benefits of a smart grid.
- Determine the various types of renewable energy.
- Explain the different types of solar panels.
- Analyze the common types of wind farms.
- Design and components of a smart home.

Targeted Competencies:

At the end of this smart grid for non-engineers training, the participant's competencies will:

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- The conventional power grid system.
- Smart grid blueprint and characteristics.
- Types of renewable energy.
- Wind turbines.
- Photovoltaic cells.

Understanding the Concept of Smart Grids:

Are you interested in understanding the concept of Smart Grids rather than from an engineering perspective? Our "Engineering for Non-Engineers: Smart Grids in the Power System" course is tailored just for you.

This smart grid for non-engineers program delves into the intricacies of smart grid technology, exploring its meaning and importance in modern energy systems. Discover smart grid solutions and how they optimize energy distribution, paving the way for a more efficient and sustainable future.

Are you interested in a smart grid certification program? Join us in unlocking insights into the smart grid system and energy smart grid technology. Learn what a smart grid is and how it revolutionizes power management. Enroll today to demystify the world of smart grids without needing an engineering background.

Course Content:

Unit 1: Conventional Electrical Generation, Transmission, and Distribution Process:

- Differences between alternating current and direct current.
- Standard electrical units' power, voltage, current, power factor, and frequency.
- Types of generation of electrical power systems.
- Transmission and distribution of electric power.
- Domestic electrical system.
- Industrial electrical system.

Unit 2: Types of Renewable Energy:

- Wind turbines.
- Construction and operation of wind farms.
- Solar panels.
- Construction and operations of photovoltaic cells.
- Biomass energy.
- Geothermal energy.

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Unit 3: Introduction to Smart Grid:

- What is the smart grid?
- Smart grid attributes.
- Characteristics of a smart grid.
- Smart grid blueprint.
- Smart grid best practices.
- Smart grid and microgrid.

Unit 4: Smart Homes and Consumer Engagement:

- Concepts of a smart home.
- Merits of a smart home.
- Characteristics of a smart home.
- Introduction of smart meters.
- Consumer engagement in a smart grid system.
- Smart grid integration with the power grid.

Unit 5: Energy Storage Systems and Smart Sensors:

- Types of energy storage systems.
- Importance and merits of battery systems.
- Smart grid sensors and appliances.
- Safety features.
- Smart electric vehicles.

Conclusion:

In the "Engineering for Non-Engineers: Smart Grids in the Power System" course, non-engineers comprehensively understand smart grid technology and its impact. This program covers the fundamentals, from defining a smart grid to exploring energy smart grid solutions and technology.

Participants emerge with knowledge about the smart grid system's role in optimizing power distribution and sustainability. This course offers the essential training needed to navigate the complexities of power smart grid management and get a smart grid certification program.

Participants in this smart grids for non-engineers training will unlock the potential of smart grid energy, even without prior engineering experience. Explore the future of energy management through our accessible and enlightening smart grid course designed specifically for non-engineers.