

Scandinavian Academy
Training Center

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Riyadh - Al Khaleej District - Sheikh Abdul Aziz Bin Abdul Rahman Bin Bishr Street - 13223 - Office No. 5 | P.O.BOX : 13224

Course: Power Stability Control and Interpersonal Skills

Code	City	hotel	Start	End	price	Language - Hours
EE-513SA	Dammam	Hotel Meeting Room	2027-05-16	2027-05-27	22450 SR	En - 50

Introduction

The increased loading of power system transmission lines and equipment is resulting in operation closer to the stability limits of the system. As a result, there is increasing concern over the secure operation of power systems all over the world.This course will provide a comprehensive overview of fundamental concepts on voltage stability, such as the significance of reactive power management and voltage control. Modelling and analysis techniques to identify potential voltage stability problems and solutions during the planning, design, and operation of power systems will also be presented. The course will also cover in detail various technologies available today to prevent voltage stability on power systems, including static var compensators and inverter-based dynamic compensators. Case studies of actual voltage instability problems and equipment solutions will also be presented. The impact of wind generation on system voltage stability, interconnect requirements, reactive power and voltage control equipment solutions will also be covered.

Objectives

At the end of this course, participants will be able to:

- Understanding power system stability problems and their classification.
- Understanding modeling requirements of power system equipment for different studies.
- Understanding causes of instability and methods of analysis and enhancement of different power system small and large disturbance rotor angle stability

phenomena.

- Understanding different methods and techniques of power system stability controls and their limitations.
- Using computer packages for analysis of power system stability problems.
- identify the components of effective communication
- identify the most important theories of communication
- To improve my skills of listening and speaking
- Acquire the skill of intimacy and influence people
- Having a number of techniques that enable him to correct the communication errors
- Enable participants to write good management and avoid common mistakes
- The use of persuasive processes in contact with others
- Acquire the skill of presentation effective and efficient

Who should attend

- Project Managers , Electric utility transmission and distribution engineers, consultants, and other personnel involved in transmission system planning, design, and operation.

Outline

Day 1

- Communication (concept, objectives, importance)
- the components of the communication process, and elements of effective communication
- types of oral communication and non verbal means of communication
- Davis model for communications
- Effective communication skills with the public and subordinates
- The Johari Window model

Day 2

- patterns of representative
- building rapport with the other
- Communication Theories
- Methods of Communication
- Communication obstacles and overcome them

Day 3

- Listening (concept, objectives, importance)
- Listening Features
- stages of the process of listening
- Body Language
- how to read body language signs and gestures
- reading and analyzing body language
- body language signals and meanings :
- eyes | mouth | head | arms | hands | handshakes | legs and feet | personal space

Day 4

- Persuasion (the concept, objectives, importance)
- the impact of the four models
- elements of the process of persuasion
- methods and skills of persuasion
- tools of persuasion
- success factors of persuasion
- Dealing with difficult people with foul

Day 5

- Dumping and presentation
- assess your abilities in the Presentation

- How to face fear and controlled?
- Break the psychological barrier?
- Presentation: Before the show, during the show, concluding the presentation
- methods and secrets of the ten providers of television programs and radio
- Role playing
- workshops and laboratories applied

DAY 6

- Introduction and Basic Concepts
- Definition and classification of power system stability
- Conceptual relationship between power system stability, security and reliability
- An elementary view of the voltage stability phenomenon
- Equipment Characteristics Impacting Voltage Stability
- Synchronous machines
- Excitation systems
- AC Transmission
- Power system loads
- Reactive Power and Voltage Control
- Methods of voltage control
- Principles of reactive compensation in transmission systems
- Static and dynamic compensators

DAY 7

- Typical Scenarios of Voltage Instability
- Long term voltage instability
- Short term voltage instability

DAY 8

- Prevention of Voltage Instability
- System design measures

- System operating measures
- Methods of identifying causes of instability and selecting remedial measures
- Case studies and illustrative examples
- Coordinated voltage control schemes: secondary and tertiary voltage control
- Technologies for Prevention of Voltage Instability
- Static VAR compensators
- Large STATCOMs
- Smaller inverter
- based dynamic compensators
- Case studies and illustrative examples

DAY 9

- Impact of Wind Generation on System Voltage Stability
- Wind turbine generator types
- Wind generation interconnect requirements
- Equipment solutions for reactive power and voltage control
- Case studies of wind plant compensation systems
- Major Power Grid Blackouts
- Description of events
- Causes of blackouts
- Lessons learned

DAY 10

- Comprehensive Approach to Power System Security Requirements
- Application of power system controls
- Defense plans against extreme contingencies
- Online security assessment
- Reliability management system
- Real time monitoring and control
- Risk based Dynamic security Assessment

The Scandinavian Academy for Training Center adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training Center.

Program Timings: 9:00 AM to 2:00 PM

The program includes:

- A daily buffet provided during the sessions to ensure participants comfort.
- A closing ceremony on the final day to distribute certificates and celebrate participants achievements.
- **Note: All prices are exclusive of 15% Value Added Tax (VAT).**

Our Success Partners

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