



# دورة تدريبية في أنظمة FACTS: أفضل الممارسات للمهندسين



**AGILE LEADERS**  
Training Center

19 - 23 Jan 2027  
عن بعد



## دورة تدريبية في أنظمة FACTS: أفضل الممارسات للمهندسين

المرجع: 36249\_65281 التاريخ: 19 - 23 Jan 2027 الموقع: عن بعد الرسوم: Euro 3000

### Course Overview:

The course is a comprehensive program designed to equip engineers with in-depth knowledge and practical skills in FACTS of controllers and power transmission. This course delves into the essential concepts and applications of Flexible AC Transmission Systems FACTS, focusing on static shunt and series converters, and the Unified Power Flow Controller UPFC. Participants will gain insights into Voltage Sourced Converters, Current Sourced Converters, and the design of FACTS controllers. With a strong emphasis on Power Transmission Stability, Controllable VAR Generation, and Power Oscillation Damping Techniques, this course offers hands-on learning and real-world applications. Engineers will learn to enhance voltage regulation, improve transient stability, and compare SVC and STATCOM systems. By mastering Thyristor-Controlled Series Capacitors and Pulse Width Modulation PWM Converters, participants will be prepared to address complex challenges in power flow control and transmission.

### Target Audience:

- Electrical Engineers
- Power Systems Engineers
- Transmission Engineers
- Control Systems Engineers
- Senior Technicians
- Engineers looking to specialize in Flexible AC Transmission Systems FACTS

### Targeted Organizational Departments:

- Power Transmission Departments
- Electrical Engineering Divisions
- Control Systems Units
- R&D Departments in Power Systems

### Targeted Industries:

- Power Generation and Transmission
- Electrical Engineering Services
- Renewable Energy Sector
- Utility Companies

## Course Offerings:

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

- Understand and apply the principles of Flexible AC Transmission Systems FACTS
- Design and implement FACTS controllers in power transmission systems
- Enhance power transmission stability and efficiency using advanced techniques
- Compare and evaluate different types of static shunt and series compensators
- Implement Voltage Sourced and Current Sourced Converters effectively

## Training Methodology:

This course employs a variety of training methodologies to ensure an engaging and effective learning experience. Participants will benefit from interactive lectures, case studies, group discussions, and hands-on workshops. Real world examples and practical applications of FACTS controllers will be emphasized to bridge the gap between theory and practice. Collaborative group work and feedback sessions will encourage active participation and knowledge sharing.

## Course Toolbox:

- Comprehensive workbooks and manuals
- Access to online resources and reading materials
- Checklists and templates for FACTS controller design

## Course Agenda:

### Day 1: Concepts of Flexible AC Transmission Systems

- Introduction to Flexible AC Transmission Systems FACTS Topic 1:
- Types and Applications of FACTS Controllers Topic 2:
- Shunt Controllers in Power Transmission Topic 3:
- Series Controllers and Their Benefits Topic 4:
- Combined Shunt and Series Controllers Topic 5:
- Key Learnings and Benefits of FACTS Reflection & Review:

### Day 2: Voltage And Current Sourced Converters

- Fundamentals of Voltage Sourced Converters Topic 1:
- Single Phase and Three Phase Full Wave Bridge Converters Topic 2:
- Transformer Connections for 12-Pulse Operation Topic 3:
- Current Sourced Converters with Turn Off Devices Topic 4:
- Comparison Between Voltage Sourced and Current Sourced Converters Topic 5:
- Practical Applications of Converters Reflection & Review:

### Day 3: Static Shunt Compensators

- Objectives and Methods of Shunt Compensation Topic 1: •
- Midpoint Voltage Regulation Techniques Topic 2: •
- Enhancing Transient Stability and Power Oscillation Damping Topic 3: •
- Variable Impedance and Switching Converter Type VAR Generators Topic 4: •
- Comparison of SVC and STATCOM Systems Topic 5: •
- Enhancing Stability with Shunt Compensators Reflection & Review: •

### Day 4: Static Series Compensators

- Objectives of Series Compensation Topic 1: •
- Techniques for Voltage Stability Improvement Topic 2: •
- Thyristor-Controlled Series Capacitor TCSC Systems Topic 3: •
- Operating Control Schemes for Series Compensators Topic 4: •
- Static Synchronous Series Capacitor SSSC Topic 5: •
- Effective Use of Series Compensators Reflection & Review: •

### Day 5: Power Flow Controllers

- Basic Principles of Unified Power Flow Controller UPFC Topic 1: •
- Real and Reactive Power Flow Control Topic 2: •
- Dynamic Performance of Power Flow Controllers Topic 3: •
- Interline Power Flow Controller IPFC Applications Topic 4: •
- Multifunctional FACTS Controllers Topic 5: •
- Advanced Power Flow Control Techniques Reflection & Review: •

### How This Course is Different from Other FACTS Maintenance Courses:

This course stands out by offering a hands-on, practical approach to learning about Flexible AC Transmission Systems FACTS. Unlike other courses, it integrates real-world applications and case studies, ensuring that participants can directly apply their learning to solve complex power transmission challenges. The course also covers a wide range of FACTS controllers, from static shunt and series compensators to advanced power flow controllers like UPFC and IPFC. With a strong emphasis on practical skills and industry best practices, participants will leave with the confidence and expertise needed to excel in the field of power transmission engineering.



## فئات الدورات التدريبية



HR TRAINING & DEVELOPMENT

دورات إدارة و تطوير الموارد البشرية



دورات إدارة و تحليل البيانات ودورات علم البيانات



دورات إدارة الجودة وتطوير العمليات



الدورات التدريبية في مجال البيئة والاستدامة



دورات التسويق وإدارة علاقات العملاء وإدارة المبيعات



دورات التدريب القانوني والمشتريات والتعاقدات



دورات الاتصال الجماهيري و السياسات والعلاقات العامة



دورات النظم السيبراني ودورات تقنية المعلومات



دورات الصيانة ودورات المجالات الهندسية المتنوعة



دورات الصحة والسلامة والأمن المهني



دورات السكرتارية و إدارة المكاتب



دورات الحوكمة وإدارة المخاطر والامتثال



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## فئات الدورات التدريبية



دورات معتمدة من قبل هيئات دولية



دورات في مجالات القيادة والإدارة



دورات المهارات الشخصية وتطوير الذات



دورات المحاسبة و التمويل و دورات الإدارة  
المالية



دورات مكتب إدارة المشاريع وإدارة المشاريع  
الرشيقية

## مدن التدريب



اسطنبول - تركيا



أمستردام - هولندا



أكرا - غانا



أثينا - اليونان



الرياض - المملكة العربية السعودية



الدوحة - قطر



الدار البيضاء - المغرب



الجبيل - المملكة العربية السعودية



باريس - فرنسا



المنامة - مملكة البحرين



الكويت - الكويت



القاهرة - مصر



براغ - جمهورية التشيك



بانكوك - تايلند



بالي - جمهورية إندونيسيا



باكو - أذربيجان

## مدن التدريب



جاكرتا - جمهورية اندونيسيا



تبليسي - جورجيا



بوكيت - تايلاند



برشلونة - إسبانيا



روما - إيطاليا



دبي - الإمارات العربية المتحدة



جوهانسبرغ - جنوب إفريقيا



جنيف - سويسرا



شرم الشيخ - مصر



سيول - كوريا الجنوبية



سان دييغو - الولايات المتحدة الأمريكية



زنجبار - تنزانيا



طوكيو - اليابان



طشقند - أوزبكستان



طرابزون - تركيا



شيكاغو - الولايات المتحدة الأمريكية

## مدن التدريب



كوالالمبور - ماليزيا



فيينا - النمسا



عن بعد - منصة زووم



عمان - المملكة الأردنية الهاشمية



ماربيا - اسبانيا



لندن - المملكة المتحدة



لانكاوي - ماليزيا



كيب تاون - جنوب إفريقيا



ميلان - إيطاليا



مونترنو - سويسرا



مسقط - سلطنة عمان



مدريد - إسبانيا



نيس - فرنسا



نيروبي - كينيا



ميونخ - ألمانيا

# WHO WE ARE

Agile Leaders is a renowned training center with a team of experienced experts in vocational training and development. With 20 years of industry experience, we are committed to helping executives and managers replace traditional practices with more effective and agile approaches.

## OUR VISION

We aspire to be the top choice training provider for organizations seeking to embrace agile business practices. As we progress towards our vision, our focus becomes increasingly customer-centric and agile.

## OUR MISSION

We are dedicated to developing value-adding, customer-centric agile training courses that deliver a clear return on investment. Guided by our core agile values, we ensure our training is actionable and impactful.

## WHAT DO WE OFFER

At Agile Leaders, we offer agile, bite-sized training courses that provide a real-life return on investment. Our courses focus on enhancing knowledge, improving skills, and changing attitudes. We achieve this through engaging and interactive training techniques, including Q&As, live discussions, games, and puzzles.



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## CONTACT US

 UAE, Dubai Investment Park First

 +971585964727  
+447700176600

 [sales@agile4training.com](mailto:sales@agile4training.com)