GE 6FA Gas Turbine

MASTER OPERATIONS, RELIABILITY & PERFORMANCE EXCELLENCE

MEERIM VISIONARY TRAINING (FZE)

INSPIRING AMBITION AND SUCCESS

Training Program

8-12 FEBRUARY 2026

DUBAI, UAE

Return on Investment (ROI) for GE 6FA Gas Turbine Training

Reduced Unplanned Downtime (Major Financial Impact): A single unplanned trip or forced outage on a GE 6FA turbine can cost anywhere from USD 20,000 to 150,000+ per hour, depending on the facility.

After training, operators and maintenance teams make fewer operational mistakes, identify early warning signs, and react faster — avoiding costly stoppages.

Improved Fuel Efficiency (1–3% Gain = Huge Savings): A small improvement in combustion tuning, inlet air management, and operating discipline can result in a 1–3% efficiency gain.

For a 6FA turbine running continuously, even a 1% improvement can translate to hundreds of thousands of dollars annually in fuel savings.

WWW.MVTUAE.COM

www.mvtuae.com

TECHNICAL PROPOSAL

GE 6FA GAS TURBINE TRAINING

MASTER OPERATIONS, RELIABILITY & PERFORMANCE EXCELLENCE

Training Audience:

- Gas Turbine Operators & Senior Operators
- Power Plant Engineers (Mechanical / Electrical / I&C)
- Maintenance Engineers & Supervisors
- Commissioning Engineers
- O&M Contract Engineers
- Shift Leaders & Operation Supervisors

Training Overview:

This 5-day program provides a complete understanding of GE 6FA Gas Turbine design, operation, maintenance, and control systems. Participants will explore mechanical, electrical, and control aspects, including real case studies from power plants and oil & gas facilities.

Training Objectives:

- Understand the design and functional principles of the GE 6FA gas turbine
- Operate the turbine safely, efficiently, and within OEM specifications
- Interpret alarms, trips, and protective logic in the control system
- Perform performance evaluation and identify efficiency losses
- Recognize failure indicators and diagnose common equipment issues
- Understand the required maintenance intervals and outage scopes
- Execute best practices in reliability, monitoring, and operational excellence

www.mvtuae.com

www.mvtuae.com

KEY OUTCOMES

IMPROVED MAINTENANCE PLANNING & COST AVOIDANCE

Organizational Benefits:

- Improved Reliability & Reduced Downtime
- Enhanced Safety and Compliance: Gas turbines operate under high temperature and pressure. Skilled personnel understand safe operating limits, startup/shutdown procedures, and emergency response
- Cost Savings Through Better Maintenance Planning
- Optimized Performance and Fuel Efficiency
- Stronger Decision-Making and Technical Confidence

Personal Benefits:

- Strong mastery of GE 6FA gas turbine architecture, systems, and operation
- Improved troubleshooting and diagnostic competence
- Increased credibility as a technical professional
- Career progression opportunities in operations, maintenance, and reliability
- Confidence to handle abnormal conditions, trips, alarms, and startup issues
- Ability to contribute more effectively to asset performance and reliability teams

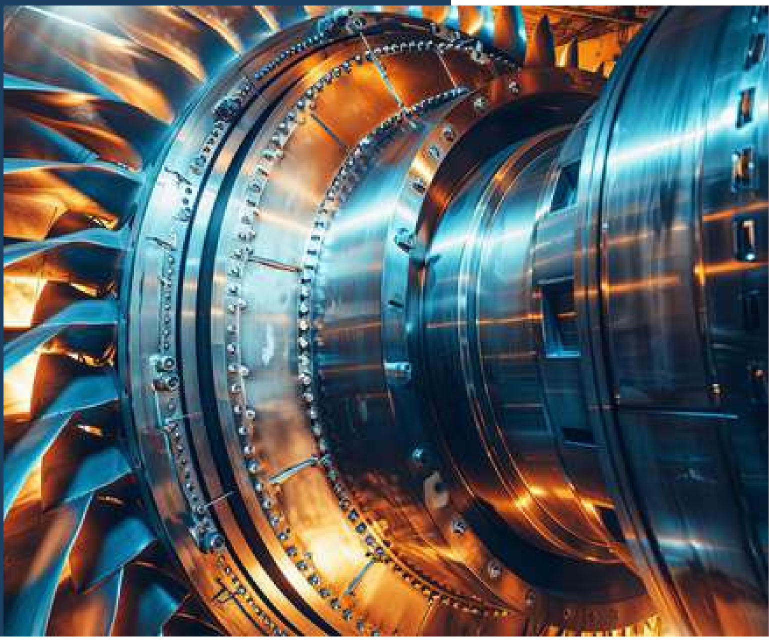
Training Methodology:

- Instructor-led class sessions with interactive visuals and animations
- Case studies based on real-world 6FA turbine incidents and solutions
- Group discussions to strengthen understanding and problem-solving
- Control system walkthroughs for sequencing and protection logic
- Daily short assessments to reinforce learning
- Assessments & Certification: Knowledge tests, feedback sessions, and a certificate of completion provided

Train Smart!

Fix Fast!

Prevent Failure!



GE 6FA Gas Turbine Training

Training Modules:

Day 1 – Gas Turbine Fundamentals & GE 6FA Overview

Module (01)
- Gas Turbine Operating Principle
- Brayton cycle
- Energy conversion process
- Simple cycle vs combined cycle
- Heat rate and efficiency concepts

Module (02)
- Heavy-Duty Gas Turbine Overview
- Frame gas turbines vs aero-derivative
- Industrial and utility applications
- Overview of GE frame turbine family

Module (03)
- GE 6FA Design Introduction
- Rated power and speed
- Major assemblies
- Rotor–stator configuration
- Airflow and gas path

Module (04)
- Safety in Gas Turbine Plants
- Fire and explosion hazards
- LOTO procedures
- Permit to Work system
- PPE requirements
- Emergency response principles

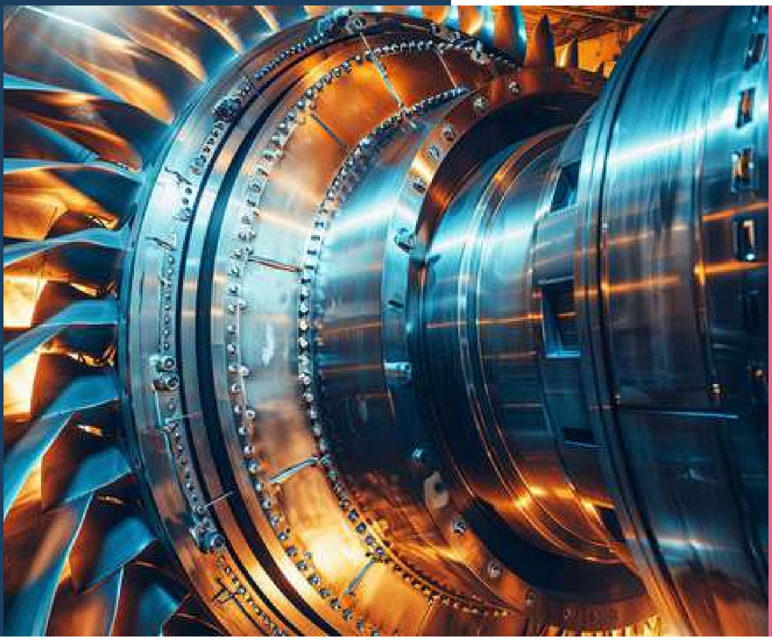
Day 2 – Major Mechanical Components

Module (05)
- Air Intake & Filtration System
- Inlet air quality requirements
- Filter types and arrangements
- Anti-icing and bleed heating
- Inlet cooling systems

Module (06)
- Axial Compressor Section
- Compressor stages
- Variable Inlet Guide Vanes (VIGV)
- Surge and stall
- Online and offline washing

Module (07)
- Combustion System
- DLN vs diffusion combustion
- Fuel nozzles and liners
- Transition pieces
- Flame detection
- Emission control (NOx, CO)

Module (08)
- Turbine Section
- High-pressure turbine stages
- Nozzles and buckets
- Blade cooling methods
- Thermal stress and creep



GE 6FA Gas Turbine Training

Training Modules:

Day 3 – Auxiliary Systems

Module (09)
- Fuel Gas & Liquid Fuel Systems
- Fuel gas conditioning
- Pressure regulating valves
- Liquid fuel skids
- Dual-fuel changeover

Module (10)
- Lubrication Oil System
- Main and auxiliary oil pumps
- Emergency DC pump
- Oil coolers and filters
- Bearing lubrication
- Contamination control

Module (11)
- Cooling & Sealing Systems
- Turbine cooling air
- Labyrinth and brush seals
- Generator seal oil system

Module (12)
- Hydraulic & Atomizing Air Systems
- Servo oil functions
- Fuel atomizing air
- Control valve actuation

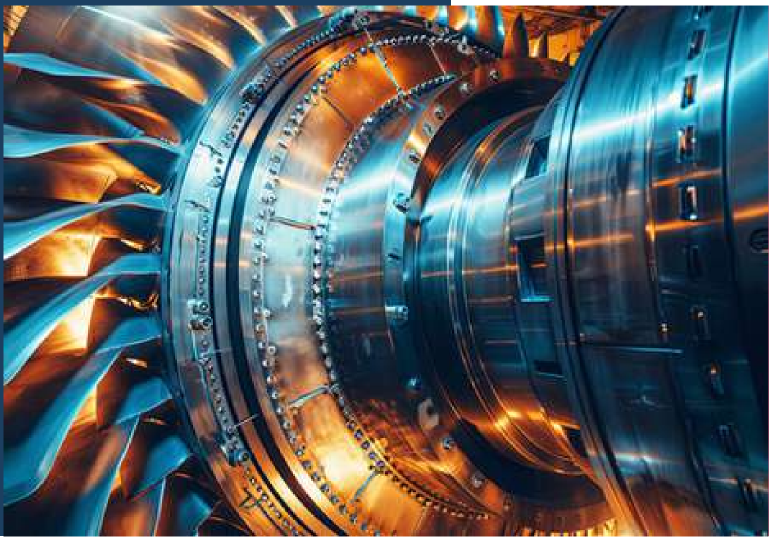
Day 4 – Starting System, Controls & Protection

Module (13)
- Starting System
- Starting motor / static starter
- Turning gear system
- Cranking and purge sequence

Module(14)
- Control System Architecture
- Mark VI / Mark VIe control system concept
- PLC–DCS integration
- HMI operation
- Control modes (speed, temperature, load)

Module (15)
- Protection & Trip Systems
- Overspeed protection
- High vibration
- High exhaust temperature
- Flame failure
- Lube oil low pressure

Module (16)
- Interlocks, Permissives & ESD
- Pre-start permissives
- Normal trip vs emergency trip
- Emergency stop logic



GE 6FA Gas Turbine Training

Training Modules:

Day 5 – Operation, Maintenance & Troubleshooting

Module (17)

- Operating Procedures
- Pre-startup checks
- Normal startup sequence
- Loading & unloading
- Normal shutdown
- Emergency shutdown

Module (18)

- Performance Monitoring
- Key operating parameters
- Degradation causes
- Compressor fouling
- Trending and diagnostics

Module (19)

- Maintenance Strategy
- Preventive vs predictive maintenance
- Combustion Inspection (CI)
- Hot Gas Path Inspection (HGPI)
- Major Inspection (MI)
- Typical outage scope

Module (20)

- Common Problems & Troubleshooting
- Start failure
- Flame loss
- High vibration
- High exhaust spread
- Lube oil pressure loss
- Control system faults
- Case Studies & Final Assessment
- Real trip analysis
- Maintenance error review

TALK TO US

MEERIM VISIONARY TRAINING (FZE)

INSPIRING AMBITION AND SUCCESS

MEERIM Visionary Training FZE:
Mobius Institute: An Authorized Training & Examination Center

MOBIUS INSTITUTE TRAINING CENTER ATC AUTHORIZED
MEERIM VISIONARY TRAINING FZE

MOBIUS INSTITUTE BOARD of CERTIFICATION EXAMINATION CENTER AEC AUTHORIZED
MEERIM VISIONARY TRAINING FZE

info@mvtuae.com

+971 50 6525 978

www.@mvtuae.com

Rolex Tower Level 9B Office B46-067, Sheikh Zayed Road, Dubai, UAE.

ISO 9001:2015 ISO 14001:2015 ISO 45001:2018