

## [Mastering Factory Acceptance Tests \(FAT\): Ensuring Quality and Compliance in Industrial Projects](#)

### Course general description:

Factory Acceptance Testing (FAT) is a critical milestone in the lifecycle of industrial and engineering projects. It ensures that equipment, systems, and processes meet specified requirements before delivery to the site. This course is designed to provide participants with comprehensive knowledge of FAT procedures, methodologies, and best practices. Through a blend of theoretical insights, practical case studies, and hands-on exercises, participants will learn how to plan, execute, and evaluate FATs effectively, ensuring compliance with industry standards and project specifications.

### Audience:

This course is designed for:

1. Project Managers
2. Quality Assurance/Quality Control (QA/QC) Engineers
3. Procurement and Supply Chain Professionals
4. Design and Commissioning Engineers
5. Maintenance and Operations Personnel
6. Contractors and Vendors involved in manufacturing and supply
7. Regulatory Compliance Officers

### Course objectives:

By end of the course participants will gain:

1. Understand the purpose, importance, and scope of Factory Acceptance Tests in industrial and engineering projects.
2. Develop detailed FAT protocols and checklists tailored to specific projects.
3. Identify potential risks and challenges during FAT execution and propose mitigation strategies.
4. Conduct effective inspections, tests, and verifications during FAT.
5. Collaborate with cross-functional teams to ensure successful FAT outcomes.
6. Document and report FAT results accurately for stakeholder review.
7. Apply lessons learned from real-world case studies to improve future FAT processes.

### Course duration:

5 days

### Course location:

Cairo-Dubai-Istanbul

### Course contents:

#### **Day 1: Fundamentals of Factory Acceptance Tests (FAT)**

- Introduction to FAT – Definition, purpose, importance, key stakeholders, and industry standards.
- FAT Planning & Preparation – Developing protocols, defining acceptance criteria, risk assessment, and coordination.
- Acceptance Criteria & Performance Metrics – Setting clear benchmarks for testing success.
- Case Studies & Discussions – Drafting an FAT protocol and analyzing failed FAT scenarios.
- Assessment – Pretest and interactive quiz on FAT fundamentals.

#### **Day 2: Technical Aspects of FAT Execution**

- Testing Methodologies – Functional, performance, and safety tests, including tool selection and calibration.
- Data Collection & Analysis – Techniques for logging, analyzing, and interpreting FAT data.

- Inspection & Verification – Visual vs. functional testing, documentation, handling non-conformances.
- Case Studies & Practical Exercises – Using software tools for data logging and resolving non-conformance issues.
- Assessment – Quiz on technical aspects of FAT execution.

#### **Day 3: Collaboration and Communication in FAT**

- Team Coordination – Roles and responsibilities, communication strategies, conflict resolution.
- FAT Reporting & Documentation – Report structure, best practices, and presenting findings to stakeholders.
- Vendor-Client Relationship Management – Ensuring smooth interactions and aligning expectations.
- Case Studies & Role-Playing – Simulating vendor-client meetings and reviewing exemplary FAT reports.
- Assessment – Quiz on communication and documentation skills.

#### **Day 4: Advanced Topics and Risk Management**

- Advanced Testing Techniques – Automation, IoT, AI, integration testing, and cybersecurity considerations.
- Risk Management – Identifying and mitigating risks, contingency planning, and post-FAT evaluation.
- Continuous Improvement – Lessons learned, feedback loops, and refining FAT processes.
- Case Studies & Group Discussions – Developing risk mitigation strategies and overcoming FAT challenges.
- Assessment – Quiz covering advanced FAT techniques and risk management.

#### **Day 5: Final Assessment and Course Wrap-Up**

- Final Written Exam – Comprehensive test covering all FAT topics.
- Practical Assignment – Drafting an FAT protocol for a hypothetical project.
- Course Summary & Key Takeaways – Reviewing key concepts and best practices.
- Q&A and Feedback Session – Addressing participant questions and experiences.
- Certification & Course Completion – Distribution of certificates and feedback collection.

#### **Methodology:**

- 50% lectures & concepts
- 10% Videos
- 15% Case studies
- 15% Exercises
- 10% Discussions

**Course code: (TGRL007)**