



an e egis company

بروجاكس للتدريب والتطوير  
Projacs Training and Development

# Advanced Techniques to Develop, Measure & Raise Maintenance Efficiency

الإدارة المتقدمة

لقياس وتطوير مشاريع الصيانة ورفع كفاءتها

22 – 26 November 2020

Dubai / United Arab Emirates

A Member of:



PROJACS ACADEMY



ProjacsAcademy.com



## Benefits

This intensive 5-day course has been designed to benefit engineers and technicians who are involved in the operation and maintenance of any industrial unit. It covers all the fundamentals of Maintenance as well as the advanced techniques of maintenance planning, scheduling & monitoring as well as the technical steps required to develop and raise the maintenance efficiency of any running project. A focuses are directed on basic concepts of maintenance management, establishing a preventive and predictive maintenance programs and maintenance planning and scheduling procedures and expert systems for troubleshooting.

## Course Outline

### Day One

#### **Types of Maintenance**

- Maintenance philosophy
- Reactive maintenance
- Time based maintenance
- Condition based maintenance
- Proactive maintenance
- Application of maintenance programmers
- Causes of machine failures.
- Maintenance strategies

### Day Two

#### **The Failure Analysis and Troubleshooting System**

- Troubleshooting as an Extension of Failure Analysis.
- Causes of Machinery Failures.
- Root Causes of Machinery Failure.
- Expert system for maintenance
- Methods of fault analysis
- Vibration analysis and diagnostic

### Day Three

1. Inspection & remaining life evaluation of process plant equipment
2. Basics of NDT
3. Applying the predictive approach
4. Surviving the maintenance shutdown
5. The planning & scheduling machines

#### **Generalized Machinery Problem-Solving Sequence**

- Situation Analysis. Cause Analysis.
- Action Planning and Generation.
- Decision Making. Planning for Change. References.

### Day Four

#### **Machinery Component Failure Analysis**

- Rolling-Element Bearing Failures and Their Causes.
- Troubleshooting Bearings.
- Gear Failure Analysis.

- Lubrication. Defects
- Wear. Scoring. Surface Fatigue.
- Failures from the Manufacturing Process.
- Gear-Coupling Failure Analysis.

#### **Build a and implement a preventive maintenance program**

- Applying the predictive approach
- Computer applications in maintenance experience documentation and expert system

#### **Day Five**

1. Perform maintenance planning and scheduling
2. Manage maintenance spare parts
3. Building PM program
  - Inspection
  - Adjustments
  - Testing
  - Calibration
  - Replacements

## Training Method

- Pre-assessment
- Live group instruction
- Use of real-world examples, case studies and exercises
- Interactive participation and discussion
- Power point presentation, LCD and flip chart
- Group activities and tests
- Each participant receives a binder containing a copy of the presentation
- slides and handouts
- Post-assessment

## Program Support

This program is supported by interactive discussions, role-play, and case studies and highlight the techniques available to the participants.

## Schedule

**The course agenda will be as follows:**

- |                     |                  |
|---------------------|------------------|
| • Technical Session | 08.30-10.00 am   |
| • Coffee Break      | 10.00-10.15 am   |
| • Technical Session | 10.15-12.15 noon |
| • Coffee Break      | 12.15-12.45 pm   |
| • Technical Session | 12.45-02.30 pm   |
| • Course Ends       | 02.30 pm         |

## Course Fees\*

- **2,950USD**  
*\*VAT is Excluded If Applicable*

مقدمة

قد تم تصميم هذه الدورة المكثفة لمدة 5 أيام لصالح المهندسين والفنيين الذين يشاركون في تشغيل وصيانة أي وحدة صناعية. وهو يغطي جميع أساسيات الصيانة فضلا عن التقنيات المتقدمة لجدولة الصيانة، والتخطيط والرصد وكذلك الخطوات التقنية اللازمة لتطوير ورفع كفاءة الصيانة في أي مشروع قيد التشغيل A. يركز على توجه المفاهيم الأساسية لإدارة الصيانة، وإنشاء برامج الصيانة الوقائية والصيانة التنبؤية والتخطيط وإجراءات الجدولة والنظم الخبيرة لاستكشاف الأخطاء وإصلاحها.