



PROJACS ACADEMY
by egis



Advanced Techniques to Develop, Measure & Raise Maintenance Efficiency

الادارة المتقدمة لقياس وتطوير مشاريع الصيانة ورفع
كفاءتها

19 - 23 June 2023

Dubai / UAE

Introduction

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. 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.

Objectives

By the end of the course, participants would be able to apply advanced maintenance techniques to develop, measure, and raise maintenance efficiency objectives in their organizations. They would also be able to work collaboratively with other stakeholders to achieve maintenance objectives and contribute to the overall success of the organization.

Who Should Attend?

- Mechanical and Electrical Engineers
- Maintenance Engineers and Supervisors

Course Outline

Day One

1. 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

2. 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

3. Inspection & remaining life evaluation of process plant equipment

4. Basics of NDT

5. Applying the predictive approach

6. Surviving the maintenance shutdown

7. The planning & scheduling machines

8. Generalized Machinery Problem-Solving Sequence

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

Day Four

9. 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.

10. Build a and implement a preventive maintenance program

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

Day Five

11. Perform maintenance planning and scheduling

12. Manage maintenance spare parts

13. 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, 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*

- **3,200 USD**
**VAT is Excluded If Applicable*

المقدمة

تم تصميم هذه الدورة التدريبية المكثفة لمدة ٥ أيام لإفادة المهندسين والفنيين الذين يشاركون في تشغيل وصيانة أي وحدة صناعية. تغطي جميع أساسيات الصيانة بالإضافة إلى التقنيات المتقدمة لتخطيط الصيانة والجدولة والمراقبة بالإضافة إلى الخطوات الفنية اللازمة لتطوير ورفع كفاءة الصيانة لأي مشروع قيد التشغيل. يتم توجيه التركيز على المفاهيم الأساسية لإدارة الصيانة، وإنشاء برامج الصيانة الوقائية والتنبؤية وتخطيط الصيانة وإجراءات الجدولة والأنظمة الخبيرة لاستكشاف الأخطاء وإصلاحها.

الأهداف

عند نهاية الدورة، سيكون المشاركون قادرين على تطبيق تقنيات الصيانة المتقدمة لتطوير وقياس ورفع أهداف كفاءة الصيانة في مؤسساتهم. سيكونون أيضًا قادرين على العمل بشكل تعاوني مع أصحاب المصلحة الآخرين لتحقيق أهداف الصيانة والمساهمة في النجاح الشامل للمؤسسة.

الحضور

- المهندسين الميكانيكيين والكهربائيين
- مهندسي الصيانة والمشرفون