



# ME074: Maintenance Task Analysis (MTA)



## Training Descriptions & Objectives:

MTA is the identification of the steps, spares and materials, tools, support equipment, personnel skill levels as well as any facility issues that must be considered for a given repair task. Also included in the MTA are elapsed times required for the performance of each task. MTA's cover both corrective and preventative maintenance tasks and when complete, identify all physical resources required to support a system. The Maintenance Task Analysis (MTA) when completed will detail the resources required to implement effective corrective and preventative maintenance tasks for a system and/ or equipment. The MTA is a detailed analysis performed for each of the corrective and preventative maintenance tasks. These maintenance tasks were earlier identified in the LSA process. Consideration would be given to all the support resources that will be required to conduct each of the maintenance tasks.

## Training Designed for:

This course is intended for personnel who wish to get a comprehensive understanding and practical job skills for Maintenance Management function. Supervisors, engineers, planners and Managers who are assigned the maintenance management or involve in maintenance practices, and opportunities for improvement, Maintenance cost, equipment and unit reliability. Attendees should have an understanding of their plant's current performance.

## Training Program:

### DAY ONE:

- ❖ PRE-TEST
- ❖ Introduction
- ❖ Effective Maintenance Management
  - Not Knowing What You Have
  - Over or Under Maintenance
  - Improper Operation
  - Improper Risk Management
  - Sub-optimized Asset Management Systems
- ❖ The Maintenance Task Analysis (MTA)
  - Introduction Task analysis
  - Hierarchical Task Analysis
  - Identifying each step of the repair process
  - Understanding the Task Requirements
    - Task analysis
    - The data collected
    - Establishing baseline data

### DAY TWO:

- ❖ MTA Description and Investigation Resources
  - Person or persons participating
  - Time duration of each person's participation





- Tools or support equipment required
- Parts and materials needed for the step Analysis the task done
- Time for the task
- The skill level
- Additional training
- Any facility implications

### DAY THREE:

- ❖ Corrective Maintenance Task Generation
  - Supportability Analysis
  - Staffing Optimization
- ❖ MAT output
  - Job role specifications
  - The competencies, skills, and knowledge required to perform these duties
  - A suitable organisational structure providing adequate supervision and support
  - Communication and user requirements
  - Training and continued performance requirements
  - Ergonomic designs and layout for equipment
  - A change management plan

### DAY FOUR:

- ❖ Reliability and Maintenance
  - Introduction
  - The purpose of maintenance
  - Function of maintenance
  - Type of Maintenance Strategy
  - Maintenance Methods
  - Failure-Based or Breakdown Maintenance
  - Scheduled or Preventive Maintenance
  - Predictive Maintenance
  - Proactive Maintenance
  - Summary of Predictive and Proactive Practices
  - Condition-Based Maintenance (CBM)
  - Reliability-Centered Maintenance (RCM)
  - Total Productive Maintenance (TPM)
- ❖ Computerized Maintenance Management Systems (CMMS)

### DAY FIVE:

- ❖ Techniques of Failure Analysis
- ❖ Equipment Failure
- ❖ Where to Start Equipment Criticality or Risk
- ❖ Reliability Centered Maintenance (RCM) Overview
- ❖ Failure Analysis - Closing the Loop
  - Root Cause Failure Analysis (RCFA)
  - Failure Hierarchies





- ❖ FMEA & FMECA
  - Introduction
  - Purpose and objectives of the analysis
- ❖ Failure modes and effects analysis
  - General considerations
  - Preliminary tasks
  - Benefits of FMEA
  - Summary of procedures for FMEA
- ❖ Building a system for equipment condition indicating
  - a) Equipment data b) Failure data c) Maintenance data d) Data format
  - Failure and maintenance notations
  - Failure descriptors
  - Failure causes
  - Method of detection
- ❖ Course Conclusion
- ❖ POST-TEST and EVALUATION

### Training Requirement:

“Hand’s on practical sessions, equipment and software will be applied during the course if required and as per the client’s request”.

### Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures, Concepts, Role Play
- 30% Workshops & Work Presentations, Techniques
- 20% Based on Case Studies & Practical Exercises
- 20% Videos, Software & General Discussions
- Pre and Post Test

### Training Certificate(s):

Internationally recognized certificate(s) will be issued to each participant who completed the course.

### Training Fees:

**As per the course location** - This rate includes participant’s manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.





## Training Timings:

### Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:30	Recess (Prayer Break & Lunch)
13:30 - 15:00	Last Session

**For training registrations or in-house enquiries, please contact:**

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