

Manage Problems and Make Decisions in a Technical Environment (Classroom & Asynchronous)

ELE-PIN-4003-1.1

Code: MPMDTE

Duration: 24 Hours

Synopsis:

This module is developed to enable learners to acquire knowledge and skills to provide effective problem-solving and decision-making methodologies; covering the ability to conduct root cause analysis, to propose alternatives and/or solutions, to decide on approaches to implement solutions and to evaluate effectiveness of solution. This would help to raise industry standards on managing problems faced, which will in turn improve the competitiveness of Singapore Semiconductor Manufacturing industry in the global market.

Course Objective:

On completion of this module, learners will be able to adopt systematic approaches in managing problems and making decisions in a technical environment.

Course Outline:

The knowledge and skills covered in this module include:

Skills:

- Determine sources of variation, through data collection
- Diagnose problem and define root cause
- Verify root cause
- Propose a technical solution
- Implement technical solution
- Monitor the effectiveness of technical solution
- Update technical specifications

Knowledge:

- Main components of workflow (i.e. Equipment, system, process, etc.) and data collection points
- Types of problem solving tools (i.e. IS/IS-NOT, 'Differences and Changes', Design of Experiments, Fish-Bone Diagram, etc.)
- Types of assessment and selection tools (i.e. Pro-Con analysis, Cost-Benefit analysis, etc.)
- Organisational Approval Procedures
- Types of implementation methods (i.e. Process change, equipment re-design, training, specifications, etc.)

- Usage of monitoring tools (i.e. Templates, measuring equipment, charts, etc.)

For Whom:

Suitable for Engineers, Professionals, Managers and Executives (PMEs).

Entry Requirements:

Participants are assumed to:

- Have a basic knowledge of the Singapore Workplace Safety and Health requirements;
- Be able to listen, read and write English at a proficiency level equivalent to the Employability Skills System (ESS) level 6;
- Be able to manipulate numbers at a proficiency level equivalent to Employability Skills System (ESS) level 6.

Training Medium:

This module is conducted in English.

Training Methodology:

This module is delivered through e-learning, lectures, group discussions and case studies.

Essential Requirement:

Participants are required to bring their personal laptop for the work assignment.

Assessment Methodology:

The assessment is conducted through oral/written assessment, work assignment and presentation.

Certification:

An individual who completes a module will be awarded a Statement of Attainment (SOA).