

Course Title: SURFACE FINISH MEASUREMENT Course Code: MET 107

Course Background / Summary:

In the manufacturing industry, the type of surface finish that results from a machining process determines how well that surface looks, feels, wears, gives off heat and accepts coatings. Depending on their function, different types of parts require different types of surfaces. Some parts require a smooth surface finish and some require a rougher surface. Also, customers now require tighter dimension tolerances. A smooth surface finish helps parts fit the required tolerances and function under prolonged use. There are various ways to measure, check and evaluate or even do testing the surface finish. This course is intended to provide the trainees with scientific knowledge of surface finish measurement and practical skills of surface finish measuring instruments and range from simple surface roughness specimens to highly sophisticated types such as stylus-type instruments.

Course Objectives:

- Describe main components and configuration of CMM;
- Measure part features with complex design through the use of CMM; and
- Highlight the advantages of CMM applications in the manufacturing industry.

Target Audience:

- Technicians, Supervisors, Quality Practitioners, Quality Inspectors, Metrologists, Technologists, Engineers, Instructors, Trainers and Lecturers.

Course Duration: 3 Days

Course Contents

1.0 Definition and Applications of Metrology

5.0 Surface Texture

2.0 The Importance of Metrology in Manufacturing Industry

6.0 Surface Finish Measuring Parameters and Tolerances

3.0 Classification of Measurement Methods and Measuring Instruments

7.0 Surface Finish Measuring Instruments

4.0 Surface Finish Control

8.0 Advantages of Surface Finish Measurement Applications