Course Title: DIMENSIONAL METROLOGY — Course Code: MET 103

Course Background / Summary:

In the manufacturing industry, the main concern of metrology is by measuring length quantities in many ways in which it manifests itself in a part or product. It is concerned with finding the length of lines, areas of surfaces and volumes of solids from certain simple data of lines and angles. This includes those measurements that are required to use tools and instruments for designing, building, operating and maintaining material objects. This is the reason for the term Dimensional Metrology. Therefore, the main intention of this course is to provide the trainees with basic scientific knowledge and practical skills of measurement using physical measurement equipment to quantify the physical size of any given workpiece.

Course Objectives:

- Describe the concept of dimensional metrology.
- Identify major types of measurement methods and measuring instruments used for dimensional metrology.
- Perform measurements of various parameters through the use of dimensional metrological instruments

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	**6.0 Classification of Measurement Methods**
2.0 Measurement Underlies Human Activities	**7.0 Classification of Measuring Instruments**
3.0 The Importance of Metrology in Manufacturing Industry	**8.0 Introduction to Dimensional Metrology**
4.0 Standard System of Measurement	**9.0 Making Good Measurements**
5.0 Introduction to Geometric Dimensioning and Tolerancing (GD&T)	