

**ABOUT PRECISION MEASUREMENTS AND CHARACTERISATION CONSORTIUM AND PE WSQ PROGRAMME IN PRECISION MEASUREMENTS AND CHARACTERISATION (PMC)**

**Consortium on Precision Measurements and Characterisation (PMC)**

Precision measurements and characterisation are required by various precision engineering industries as these are used to assure product quality and more importantly for industries to improve their processes and product design. The basic tasks include measurements of dimensions, inspection of defects, and characterisation of the material properties. The PE industry is rooted rapidly into other industry sectors such as semiconductor, electronics, aerospace, automotive, bio-medical devices, PE equipment manufacturing, marine and oil and gas. This rapid trend poses challenges in terms of miniaturised dimensions, transparent surfaces, high accuracy, high resolution, and high speed manufacturing. This consortium will address the challenges by developing enabling technologies in automatic vision inspection, nano-metric measurements, and characterisation of materials. The developed technologies are useful for the PE or Perelated industries specialising in precision machining, surface coating, forming, electronics assembly, etc. This consortium will start off with five seed companies in September 2009.

**PE WSQ Graduate Diploma in Precision Measurements and Characterisation (PMC)**

The objective of this WSQ Programme is to enhance the capabilities of the participant to carry out methods, and techniques of precision measurements and characterisation required for a professional precision engineer. Through this Programme, the participants will capture the basic knowledge, methods, techniques, and skills on the precision measurements, metrology, measurement instruments operation, measurement result analysis, error transfer and control, and material characterisation. Geometric Dimensioning and Tolerancing; Optics and Optical Measurements; Dimensional Measurements and Nano-scale Metrology; Materials Characterisation as well as Advance image processing and industrial vision inspection are the five modules in the Programme.

Besides providing in-employment upgrading for existing employees, the Programmes are also targeted at retrenched professionals, managers and engineers (PMEs) who want to be trained for a career in the precision engineering and manufacturing industries.

For these participants, the one-year full-time training includes 6 months of training, attachment at SIMTech and 6 months of industry attachment.

The target for PE WSQ Graduate Diploma programe in PMC include QC and QA managers and technical staff, Managers, engineers and technical staff of automated inspection systems, machine vision systems, equipment development, optics and precision instrumentation, semiconductor, electronic, medical technology, aerospace and other industrial sectors.