

***A Two Day Staff Training Program
on
“Computer Aided Metrology”***

...For Lab Technicians

Measurement science is a handy and ever growing technology which is vital for all the branches of engineering. Measurement is a basic process allowing us to acquire and represent objective and inter-subjective information on properties of both physical and non-physical systems. In this regard, to provide the fundamental and advanced knowledge on the metrology instruments, a two day staff training program on **“Computer Aided Metrology”** was organized to the lab technicians of in-house and outside engineering colleges during 29-30 November, 2018. A total of 13 outside participants and 26 in-house participants were registered for the program and got theoretical and hands-on training on the usage of the instruments of metrology.



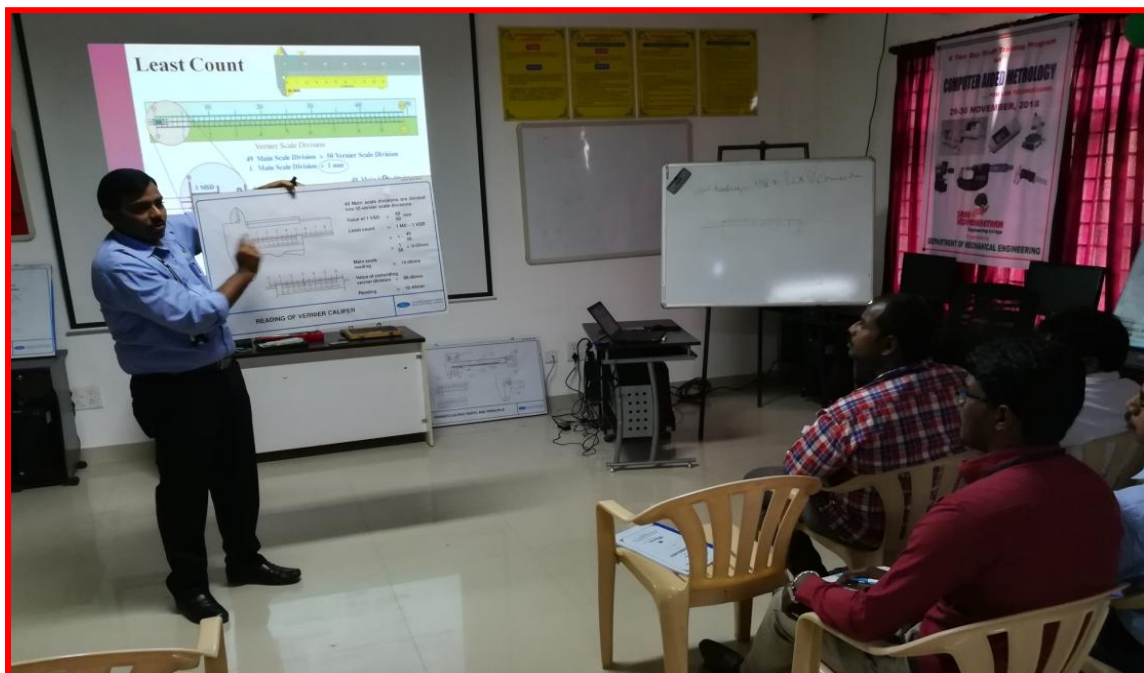
Dr. Satya Meher, Professor of Mechanical Engineering addressing the participants in the inaugural session

Dr.K.L.Narasimhamu, Professor of Mechanical Engineering explained the fundamentals of metrology, basic terminology and the role of technicians in the metrology laboratory.



Dr. K.L. Narasimhamu, Professor of Mechanical Engineering delivering the lecture on Fundamentals of Metrology

Dr. K.C. Varaprasad, Professor and Head, Department of Mechanical Engineering illustrated on linear measurements along with hands-on practice. He demonstrated the measurements of linear dimensions using Vernier Calipers, Internal and External micrometers, Vernier height gauge, Bore gauge and Dial gauge.



Dr.K.C. Varaprasad, Professor & Head of Mechanical Engineering demonstrating the instruments for linear measurement



***Dr.K.C. Varaprasad, Professor & Head of Mechanical Engineering
clarifying the doubts of participants***



Participants listening to the lectures in the training program



Mr.B.Chaithanya Krushna, Assistant Professor of Mechanical Engineering delivering the lecture on Angular Measurements

Mr. B. Chaithanya Krushna, Assistant Professor of Mechanical Engineering demonstrated the instruments used for angular measurements. He highlighted on the calibration procedures, usage and the practical applications of Universal Bevel Protractor, Sine Bar for angular measurements and about the V-Groove support.

Mr. B. Vishnuvardhana Naidu, Assistant Professor of Mechanical Engineering illustrated the basic terminology of screw threads and gear. Later he explained with practical demonstration, the measurements of screw thread parameters and gear elements. Gear Tooth Vernier Caliper, Three Wire method for screw elements were demonstrated. Hand-on- training was also given for the participants along with theoretical knowledge. Participants were given with observation book where they need to enter their reading and calculate the measurement values based on the instruments used.



Mr.B.Vishnuvardhana Naidu, Assistant Professor of Mechanical Engineering delivering the lecture on Measurements of Screw thread and Gear elements

The technicians obtained an in depth knowledge on the usage of advanced manual and computer aided metrology instruments like Profile Projector, Tool Maker's Microscope, Electronic Comparator, Autocollimator and Surface Roughness Tester.



Hands-on Training on Vernier Height Gauge and Dial Gauge

This staff training program provided a platform for technical staff to learn the theoretical basis, latest trends/features in equipment along with hands-on training on measuring machines instruments. Dr. K.C.Varaprasad, Dr. N. Manikandan, Dr. B. Sreenivasulu, Dr. B. Sachuthananthan, Mr. B. Vishnu vardhana Naidu, Mr. G. Dileep Kumar, Mr. B. Chaithanya Krushna and Mr. A. Mahanth Kumar assisted the participants during hands-on sessions.



Hands-on Training on Profile Projector



Hands-on Training on Tool Maker's Microscope



Certificate Distribution to Participants

Participation certificates were given to the participants during the valedictory session. Feedback was also collected from the participants. The participants felt that this type of programs will enhance their technical skills.



Photo with Participants

The program in turn helps the lab technicians to make the students ensure that the part, material or a component conforms to the established standard and to take decision on the defective parts. This is very much helpful to guide the students in their project works and lab exercises.