

## **ENGINEERING METROLOGY LABORATORY**


In science and engineering, objects of interest have to be characterized by measurement and testing. Measurement is the process of experimentally obtaining quantity values that can reasonably be attributed to a property of a body or substance.


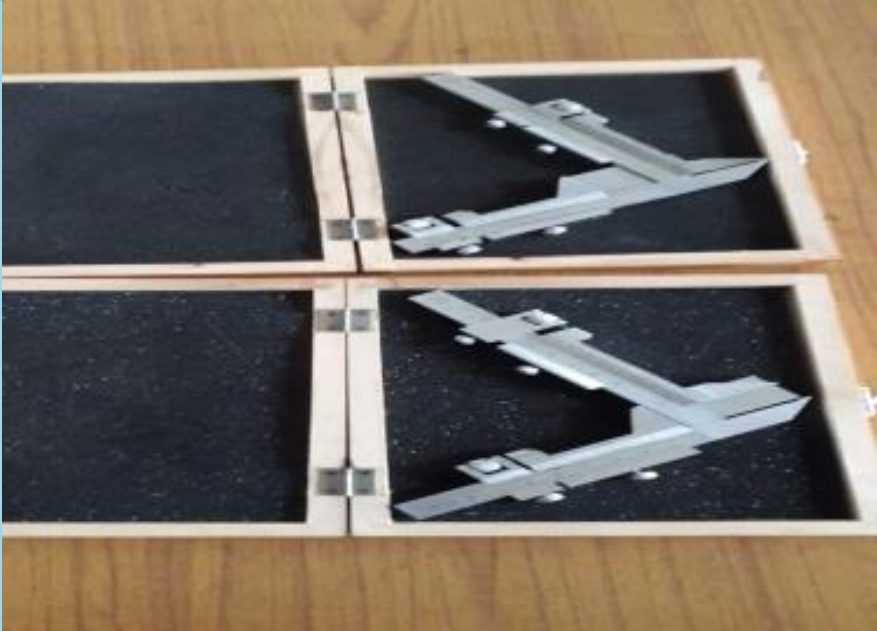
Metrology is the science of measurement; it is a fine avenue for discussing accuracy, error, and calibration.


Testing is the technical procedure consisting of the determination of characteristics of a given object or process, in accordance with a specified method. In metrology (the science of measurement), a standard is an object, system, or experiment that bears a defined relationship to a unit of measurement of a physical quantity.

The laboratory has the following equipments:

- Tool makers Microscope
- Sine Bars
- Universal Bevel Protractor
- Profile Projector
- Optical Flats & Specimen set
- Outside micrometer
- Inside micrometer
- Micrometer Depth Gauge
- Slip Gauge, Plug Gauge, Ring Gauge, Snap Gauge, Taper plug Gauge.

S.No	Name of major equipments	Photo/Image
1.	Sine Bars	 A photograph showing three metal sine bars of varying lengths and hole counts, arranged vertically on a light-colored wooden surface. The top bar is the shortest and has two circular holes. The middle bar is of medium length and has four circular holes. The bottom bar is the longest and has five circular holes. Each bar has a flat top surface and a slightly raised edge on one side.

S.No	Name of major equipments	Photo/Image
2.	Tool makers microscope	
3.	Gear Teeth Vernier Calipers	

S.No	Name of major equipments	Photo/Image
4.	Tally surf	 A digital surface roughness tester, specifically a Mitutoyo SJ-3010, is shown. The device has a monochrome LCD screen displaying the following information: 'Mitutoyo' at the top, '01/01/2018' on the left, 'SPC CAI' on the right, 'ISO1997' and '0.5 mm/s' in the middle, and 'λc 0.8' and 'x5' below that. The primary reading is 'Ra' with a large '1.208' and 'μm' below it. At the bottom of the screen, there are three buttons labeled 'POWER OFF', 'START STOP', and 'PAGE'. The device is a grey, rectangular unit with a textured lower section.