**Course Objectives**

1. To make the students to have knowledge on the various measuring and inspection devices.

2. To mould the students in designing new products by tolerances during assemblies.

3. To impart knowledge on inspection of product for tolerances for the release in the market for customers.

4. To create awareness in developing inline inspection systems.

5. To introduce the technological and engineering concepts and study the applications of measuring quantities like force, torque and temperature.

**Course Outcomes**

On completion of this course students should be able to:

1. gain knowledge on various concepts of measurement and measuring systems and also on the concepts of limits, fits and tolerances using different systems and hence they can design new products and assemblies with nationally or internationally accepted standards.

2. use different instruments that are available for linear, angular, roundness and roughness measurements as well as comparators and can also learn the concepts behind them and thereby can modify or design new instruments for the measurements.

3. acquire knowledge on terminology regarding screw threads and gears as well as their measurement and can have ability to design and manufacture these parts with negligible errors at a later stage during their career while working in industries.

4. gain knowledge on various surface roughness parameters and their measurement and also the use of advanced inspection techniques which will help them in developing new instruments using the concept of advanced inspection techniques.

5. gain knowledge on force, torque, and temperature measurements

6. acquire knowledge for employment in inspection and quality control divisions in industries.