# MATERIAL TESTING, NDT (NON DESTRUCTIVE TESTING) PROCESSES LAB

DETAILED SYLLABUS

## OBJECTIVES

Evaluate the Mechanical Properties and quality of the materials used in engineering Applications

## LIST OF GRADED PRACTICAL EXERCISES

The practical/Graded exercises should be properly designed and implemented with an attempt to develop different types of learning out comes in affective domain and psychomotor domain, so that students are able to acquire the necessary skills. Following is the list of experiments to be carried out.

## A. MECHANICAL TESTING

1. 1 Calculate Impact Value of Mild Steel, COPPER using CHARPY Impact Test & compare
2. Calculate Impact Value of Mild Steel using IZOD Impact Test Apparatus
3. Calculate Brinell Hardness Number of given material
4. Calculate Hardness of given material using Rockwell Hardness machine
5. Determination of yield stress, ultimate stress, percentage reduction in area, percentage elongation, Young's modulus by conducting tension test on Ductile Materials like Mild Steel, Aluminium in Universal testing machine. Draw Stress Strain Curve for both and compare
6. Find out Compressive Strength of C.I, M.S using Compression Testing Machine
7. Conducting bending test on wood specimen by UTM and evaluate the results
8. Penetrant tests.
9. Magna flux test.