

Maulana Abul Kalam Azad University of Technology, West Bengal*(Formerly West Bengal University of Technology)***Syllabus for B. Tech in Civil Engineering**

(Applicable from the academic session 2018-2019)

CE(ES)492	Solid Mechanics Laboratory	2P	1 Credits
Course Outcome	After going through this course, the students will be able to: <ol style="list-style-type: none">1. Demonstrate the method and findings of tension and compression tests on ductile and brittle materials.2. Explain the method of bending tests on mild steel beam and concrete beam.3. Demonstrate the method and findings of Torsion test on mild steel circular bar and concrete beam.4. Illustrate the concept of hardness and explain the procedure and findings of Brinnel and Rockwell tests.5. Demonstrate the concept and procedure of calculation of spring constant and elaborate its use in Civil Engineering.6. Demonstrate the method and findings of Izod and Charpy impact tests.7. Understand the concepts of fatigue test.		
Prerequisite	Introduction to Solid Mechanics (CE(ES)402)		
Experiment 1	Tension test on Structural Materials: Mild Steel and Tor steel (HYSD bars)		
Experiment 2	Compression Test on Structural Materials: Timber, bricks and concrete cubes		
Experiment 3	Bending Test on Mild Steel		
Experiment 4	Torsion Test on Mild Steel Circular Bar		
Experiment 5	Hardness Tests on Ferrous and Non-Ferrous Metals: Brinnel and Rockwell Tests		
Experiment 6	Test on closely coiled helical spring		
Experiment 7	Impact Test: Izod and Charpy		
Experiment 8	Demonstration of Fatigue Test		