Course Name	:	**Test.Lab Structures And Rotating Machineries**
Course Code	:	
Credits	:	
L T P	:	

Course Objective

After successful completion of this course, user will be able to successfully create a 3D model of any component.

		Total No. of Lectures = 40
Lecture wise breakup		**Number of Lectures**
1.	**INTRODUCTION TO DSP AND LMS TEST.LAB;** Digital Signal Processing basics: Aliasing-Auto Power-Spectrum-Windows-Time Domain-Frequency Domain. Introduction to LMS SCADAS, Sensors and Lemo Connectors: LMS SCADAS Types-Channels-Tacho Port-Output Port-Connections.	8
2.	**GEOMETRY;** Geometry Creation: Coordinate Systems-Components-Nodes-Lines-Surfaces	4
3.	**DATA ACQUISITION (PRE-PROCESSING)** **Signature testing with electrical motor:** Channel Setup-Tracking setup-Acquisition Setup-Online Processing-Measure **Spectral testing with aircraft model:** Channel Setup-Scope and test Setup-Measure- Validate **Impact testing with aircraft model:** Channel Setup-Impact Scope-Impact Setup-Measure- Validate	24
4.	**ANALYSIS (POST-PROCESSING);** **Modal Analysis:** Modal data Selection-Time MDOF-Band-Stabilization-Shapes-Modal Synthesis-Modal validation-Multi Run Model **Operational Modal Analysis:** Operation Data Collection-Operation Data Selection-Operation Time MDOF-Operation Synthesis-Operation validation-Multi Run Model **Practice:** Geometry Creation and Analysis with Fiber mounting Plate and Aircraft Model.	4

Course Outcome

- Student will be able to connect various hardware to software to monitor and collect data from real machines.
- Student will learn about industrial standards related to design and they convert their ideas into virtual products.