AERO STRUCTURES SIMULATION LAB

I Semester: AEROSPACE ENGINEERING

Course Code	Category	Hours / Week			Credits	Maximum Marks		
		L	T	P	C	CIE	SEE	Total
B27605	CC	-	-	3	1.5	30	70	100
Contact Classes: Nil	Tutorial Classes: Nil	Practical Classes: 36				Total Classes:36		

OBJECTIVES:

The student shall be asked to solve various problems in aerospace application using MATLAB and ANSYS

OUTCOME:

The student will gain hands on experience in MATLAB and ANSYS, and learn to solve numerically the practical boundary value problems

LIST OF EXPERIMENTS

Introduction to Matlab

1. Variables, Data types, Loops, Function files and plotting tools

Solution of boundary value problems using Matlab

2. Solution of axial bar under tension
3. Solution of bar in axial vibration
4. Conduction in axial bar

Static analysis using ANSYS

5. Solution of 2D problems (plate with hole)
6. Solution of double cantilever beam (3 D analysis)

Thermal analysis using ANSYS

7. Solution of bar in transverse vibration
8. Conduction in axial bar