

Course Number and Name													
BME7L2 - COMPUTER AIDED ANALYSIS & SIMULATION LAB													
Credits and Contact Hours													
2 & 45													
Course Coordinator's Name													
Mr.Srinivasan V													
Text Books and References													
Lab Manual													
Course Description													
This course will enable the student To gain knowledge about the basic fundamental of CAD and CAM													
Prerequisites							Co-requisites						
CAD/CAM LAB							Nil						
required, elective, or selected elective (as per Table 5-1)													
Required													
Course Outcomes (COs)													
CO1	Understand the benefits of computer aided design												
CO2	Knowledge of SIMULATION.												
CO3	Understand the computer aided manufacturing of machine elements.												
CO4	Students learn 2D design and modeling in MATLAB												
CO5	Students learn modeling 3d Drawings												
CO6	Students learn writing commands												
Student Outcomes (SOs) from Criterion 3 covered by this Course													
COs/SOs	a	b	c	d	e	f	g	h	i	j	k	l	
CO1	H							M			L		
CO2	H							M			L		
CO3			H	H	H						L		
CO4					M						L	L	
CO5					M							L	
CO6						M	M	M				L	
List of Topics Covered													
LIST OF EXPERIMENTS:													
A. PROGRAMMING IN MATLAB													
1. Simple Applications in Arithmetic, Linear Algebra, Matrix operations.													
2. Basic 2-D plots like i) Creating the circle ii) Creating the sine curve													
3. Simulation of Mechanical Systems													

B. MESHING AND ANALYSIS

1. Simple Meshes using a Meshing Software
2. Stress analysis of a plate with circular hole
3. Stress analysis of beams (Cantilever, Simply supported and fixed beams)
4. Thermal analysis of hot fluids in a pipe line
5. Mass flow of flue gases in an exhaust pipe
6. Harmonic analysis of a thin plate under axial loading
7. Mode frequency of a 2D component