Course Number and Name
BME5L1 – THERMAL LAB
Credits and Contact Hours
2 & 45
Course Coordinator's Name
Dr.Shanmuganandham
Text Books and References
Lab Manual
Course Description
To practically understand the concepts and working of various thermal application like IC engines, Steam Turbines, Compressors and Refrigeration and Air conditioning systems

Prerequisites	Co-requisites
Thermal Engineering, Thermodynamics	Nil

required, elective, or selected elective (as per Table 5-1)
Required

Course Outcomes (COs)	
CO1	Upon completion of this course, the students can able to understand the fundamentals in every area of thermal engineering.
CO2	Will understand the concepts in thermal engineering lab
CO3	Will understand the working principle of airconditioning
CO4	Will understand the wam turbinesorking of ste
CO5	Will understand the concept and working of compressors
CO6	Will understand the working principle of IC Engines

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											
CO2		H										
CO3									H			
CO4										L		
CO5				M							L	
CO6							M					L

List of Topics Covered

LIST OF EXPERIMENTS:

Flash and Fire point of liquid fuel
Determination of viscosity using Saybolt and Redwood viscometer
Flue gas analysis using Orsat apparatus
Performance characteristics of a Air blower
Valve timing diagram of a four stroke engine, Port timing diagram of a two stroke engine
Determination of mechanical efficiency of four stroke diesel engine
Determination of mechanical efficiency of two stroke petrol engine
Heat balance test on a four stroke diesel engine
Heat balance test on a four stroke petrol engine
Determination of optimum cooling water rate on a single cylinder diesel engine
Performance test on a multi cylinder petrol engine- Morse test
Test on Air compressor
Performance test on a Refrigeration plant
Performance test on A/C plant
Performance test of Cooling tower