

Course No.	Course Name	L-T-P-Credits	Year of Introduction
ME232	THERMAL ENGINEERING LABORATORY	0-0-3-1	2016
Prerequisite : Should have registered for ME204 Thermal Engineering			
Course Objectives: <ol style="list-style-type: none"> To study the various types IC engines and their parts To conduct the performance test on IC engines, compressors and blowers To familiarize equipment used for measuring viscosity, flash and fire point and Calorific value of petroleum products 			
Syllabus List of experiments: Study of I.C engines :- <ol style="list-style-type: none"> Diesel engines - all systems and parts Petrol engines - all systems and parts Experiments <ol style="list-style-type: none"> Determination of flash and fire points of petroleum products -flash and fire point apparatus Determination of viscosity of lubricating oil- viscometer Determination of calorific value of solid and liquid fuels- calorimeter Determination of calorific value of and gaseous fuels - calorimeter Performance test on petrol engines with various types of loading systems Performance test on Diesel engines with various types of loading systems Heat Balance test on petrol/Diesel engines Cooling curve of IC engines Valve timing diagram of IC engines Economic speed test on IC engines Retardation test on IC engines Determination volumetric efficiency and Air-fuel ratio of IC engines Morse test on petrol engine Performance test on reciprocating compressor Performance test on rotary compressor/blower Draw velocity profile in a pipe flow using Prandtl -Pitot tube Analysis of automobile exhaust gas and flue gas using exhaust gas analyser Note: 12 experiments are mandatory			
Expected outcome: At the end of the course the students will be able to <ol style="list-style-type: none"> Determine the efficiency and plot the characteristic curves of different types of Internal Combustion engines, compressors and blowers Conduct experiments for the determination of viscosity, calorific value etc of petroleum products 			