INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI
भारतीय प्रौद्योगिकी संस्थान तिरुपति
Yerpedu-Venkatagiri Road, Yerpedu Post, Tirupati District, Andhra Pradesh - 517 619

1.	Title of the course	Thermal and Manufacturing Laboratory
2.	Course number	ME318P
3.	Structure of credits (L-T-P-C)	0-0-3-2
4.	New course/modification to	New
5.	To be offered by	Mechanical Engineering
6.	Proposed by	BALAJI S
7.	Prerequisite	None
8.	**Course Objective(s):** To perform experiments related to applied thermal engineering, machining processes and energy conversion systems.	
9.	**Course Content:** Performance of vapour compression refrigeration system; Performance of air-conditioning system; Heat exchanger performance; Stefan-Boltzmann law verification; Pelton and Francis turbine performance; Calorific value of fuel; Pumps in parallel and series; Performance evaluation of diesel engine; Computer numerical control (CNC) lathe; CNC milling; Grinding; Wire electro discharge machining (EDM).	
10.	**Textbook(s):** 1. Kalpakjian S and Schmid S R, Manufacturing Engineering and Technology, 4th Edition, Pearson (2013). 2. Eastop T D and Mcconny A, Applied Thermodynamics for Engineering Technologists, 5th Edition, Pearson (2002).	
11.	**Reference(s):** 1. Jain V K, Advanced Machining Processes, Allied Publishers (2007). 2. Dixon S L and Hall C A, Fluid Mechanics and Thermodynamics of Turbomachines, 7th Edition, Butterworth-Heinemann (2010). 3. Stone R, Introduction to Internal Combustion Engines, 4th Edition, Palgrave Macmillan (2012).	