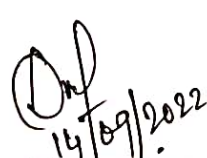


# Lesson Plan.

Discipline:		Semester:		Name of the Teaching Faculty:	
MECHANICAL		3 <sup>RD</sup>		Er. DEVI PRASAD ACHARYA	
Subject:		No. of days/per week class allotted: 4 Periods		Semester From date: 15/09/2022	
THERMAL ENGG-1				To date: 22/12/2022	
				No of weeks: 15	
Month	Week	Availability of Classes	Class Day	Theory Topics to be covered	
September	1	0	NA	NA	
September	2	4	20.09.2022	Briefing about the syllabus. Introduction to Thermodynamic systems, Macroscopic and microscopic views of study, concept of continuum,	
			20.09.2022	Thermodynamic properties of a system (Pressure, volume, temperature and units of measurement)	
			21.09.2022	Intensive and extensive properties, State and Process,	
			21.09.2022	Thermodynamic equilibrium, Quasi-static process	
September	3	4	27.09.2022	Conceptual explanation of energy, work and heat	
			27.09.2022	Work transfer,	
			28.09.2022	Displacement work,	
			28.09.2022	Forms of work transfer,	
October	4	0	NA	NA	
October	5	4	11.10.2022	Modes of heat transfer (Introductory concepts of conduction, convection and radiation)	
			11.10.2022	Sensible and latent heat, specific heat	
			12.10.2022	Energy and its sources	
			12.10.2022	Zeroth Law of thermodynamics, 1 <sup>st</sup> Law of thermodynamics	
October	6	4	18.10.2022	Energy as system property, forms of stored energy	
			18.10.2022	Application of 1 <sup>st</sup> law of Thermodynamics	
			19.10.2022	Numerical on 1 <sup>st</sup> law of Thermodynamics	
			19.10.2022	Steady Flow Energy Equation and its application to nozzle turbine and compressor	
October	7	4	25.10.2022	Perpetual motion machine of first kind, Limitations of first law, Thermal reservoir	
			25.10.2022		
			26.10.2022	Concept of heat engine, heat pump and refrigerator,	
			26.10.2022	Statement of Second law of thermodynamics (Clausius and Kelvin Planck), Perpetual motion machine of second kind	
November	8	4	01.11.2022	Concept of Heat Engine, Heat Pump & Refrigerator	
			01.11.2022	Application of 2 <sup>nd</sup> law of Thermodynamics to Heat Engine, Heat Pump & Refrigerator	
			02.11.2022	Determination of efficiencies Heat Engine	
			02.11.2022	Determination of COP of Heat Pump & Refrigerator	
			05.11.2022	Class Test-I (Test will be conducted on Saturday 2 <sup>nd</sup> Half)	

November	9	2	09.11.2022	Boyle's Law, Charle's Law, Avogadro's Law
			09.11.2022	Guy Lussac equation, General Gas equation, Characteristic gas constant, Universal Gas constant
November	10	4	15.11.2022	Specific Heats ( $C_p$ & $C_v$ ) & its relation with R
			15.11.2022	Enthalpy of a gas, Work done during a non-flow process
			16.11.2022	Application of 1st law of Thermodynamics to various non-flow process. (Isothermal & Isobaric processes)
			16.11.2022	Application of 1st law of Thermodynamics to various non-flow process. (Isentropic & Poly-tropic processes)
			17.11.2022	Internal Assessment
			18.11.2022	Internal Assessment
November	11	4	19.11.2022	Internal Assessment
			22.11.2022	Free Expansion & Throttling Process
			22.11.2022	Classification of IC Engines
			23.11.2022	Terminology of IC Engines
November	12	4	23.11.2022	Concept of CI & SI Engines
			29.11.2022	Working of 2 Stroke Petrol Engine
			29.11.2022	Working of 4 Stroke Petrol Engine
			30.11.2022	Working of 2 Stroke Diesel Engine
December	13	4	30.11.2022	Working of 4 Stroke Diesel Engine
			06.12.2022	Difference between 2 stroke & 4 stroke CI & SI engines
			06.12.2022	Concept of Air standard cycles
			07.12.2022	Concept of Air standard cycles
December	14	4	07.12.2022	Carnot cycle
			13.12.2022	Numerical on Carnot cycle
			13.12.2022	Otto cycle
			14.12.2022	Numerical on Otto cycle
			14.12.2022	Diesel cycle
December	15	4	17.12.2022	Class Test-II (Test will be conducted on Saturday 2 <sup>nd</sup> Half)
			20.12.2022	Numerical on Diesel cycle
			20.12.2022	Dual cycle
			21.12.2022	Numerical on Dual cycle
December	16	0	21.12.2022	Fuels & its types
			Extra Class	Application of different types of fuels
			Extra Class	Heating values of fuels, Quality of IC engine fuels
			Extra Class	Octane number & Cetane number
			Extra Class	Revision Class

  
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 Principal  
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