## MVSR Engineering College, Nadergul.

## **Department of Mechanical Engineering**

## **COURSE OUTCOMES**

Class: B.E.III Year I Sem (Mech. Engg.) Name of the Course: **Applied Thermodynamics** Course Code: ME 301

At the end of the course student is able to

Outcomes	POs mapped		PSOs
			mapped
Compute the performance parameters of a single	PO1,	PO2,	PSO1.
stage, multi stage reciprocating air compressors,	PO3,	PO4,	
recognize the applications of compressed air and	PO5.		
understand the importance of intercoolers and after			
coolers in air compressors.			
Classify the internal combustion engines, compute the	PO1,	PO2,	PSO1,
associated performance parameters and predict the	PO3,	PO4,	PSO2.
suitability and applications of different types of engines.	PO5,	PO7,	
	PO12.		
Summarize the combustion phenomenon for SI and CI	PO1, PO3, PO4, PO5,		PSO1,
engines vis-a-vis the various terms associated with the			PSO2.
stages of compustion and ascertain the suitability of IC	PO6, PO7,		
engine under different operating conditions.	PO10, PO12.		
Correlate the latest emission control standards being	PO1, PO3, PO4, PO5,		PSO1,
followed in our country with the corresponding			PSU2.
design of the ongine to oncure that the prescribed	PO0, 1	-07, DO12	
norms are enforced.	PO10,	PUIZ.	
Interpret the classification of boilers and suggest the	PO1,	PO2,	PSO1,
suitable boilers for various industrial applications by	/ PO3, PO4,		, PSO2.
comparing and contrasting the advantages and	PO5,	, 207,	
disadvantages of different boilers. With the aid of	PO9, I	PO12.	
detailed performance calculations related to boilers, the			
student would be able to estimate how to economize a			
given power plant			
Interpret the basic Rankine cycle used in the analysis of	PO1,	PO2,	PSO1,
a thermal power plant and evaluate the merits of using	PO3,	PO4,	PSO2.
reheating, regeneration and cogeneration for possible	PO5, I	PO7,	
tangible improvement in the performance of the plant.	PO9,	PO12.	
Porform calculations related to flow through pozzlas		DU3	
remonin calculations related to now through nozzles	PO1,	F02,	F301.
	Outcomes Compute the performance parameters of a single stage, multi stage reciprocating air compressors, recognize the applications of compressed air and understand the importance of intercoolers and after coolers in air compressors. Classify the internal combustion engines, compute the associated performance parameters and predict the suitability and applications of different types of engines. Summarize the combustion phenomenon for SI and CI engines vis-à-vis the various terms associated with the stages of combustion and ascertain the suitability of IC engine under different operating conditions. Correlate the latest emission control standards being followed in our country with the corresponding adaptations to be followed in the selection of fuel and design of the engine to ensure that the prescribed norms are enforced. Interpret the classification of boilers and suggest the suitable boilers for various industrial applications by comparing and contrasting the advantages and disadvantages of different boilers. With the aid of detailed performance calculations related to boilers, the student would be able to estimate how to economize a given power plant Interpret the basic Rankine cycle used in the analysis of a thermal power plant and evaluate the merits of using reheating, regeneration and cogeneration for possible tangible improvement in the performance of the plant.	OutcomesPOs rCompute the performance parameters of a single stage, multi stage reciprocating air compressors, recognize the applications of compressed air and understand the importance of intercoolers and after coolers in air compressors.PO1, PO3, PO5.Classify the internal combustion engines, compute the associated performance parameters and predict the suitability and applications of different types of engines. PO1, engines vis-à-vis the various terms associated with the stages of combustion and ascertain the suitability of IC engine under different operating conditions.PO1, PO1, PO1, PO10, Correlate the latest emission control standards being PO1, I design of the engine to ensure that the prescribed norms are enforced.PO1, PO1, PO1, PO1, PO1, I design of the engine to ensure that the prescribed norms are enforced.PO1, PO3, 	OutcomesPOs mappedCompute the performance parameters of a single stage, multi stage reciprocating air compressors, recognize the applications of compressed air and understand the importance of intercoolers and after coolers in air compressors.PO1, PO2, PO3, PO4, PO5.Classify the internal combustion engines, compute the associated performance parameters and predict the suitability and applications of different types of engines.PO1, PO2, PO3, PO4, PO5, PO7, PO12.Summarize the combustion phenomenon for SI and CI engines vis-à-vis the various terms associated with the stages of combustion and ascertain the suitability of IC engine under different operating conditions.PO1, PO3, PO4, PO5, PO6, PO7, PO10, PO12.Correlate the latest emission control standards being followed in our country with the corresponding adaptations to be followed in the selection of fuel and design of the engine to ensure that the prescribed norms are enforced.PO1, PO2, PO3, PO4, PO5, PO7, PO10, PO12.Interpret the classification of boilers and suggest the suitable boilers for various industrial applications by comparing and contrasting the advantages and disadvantages of different boilers. With the aid of disadvantages of different boilers. With the aid of given power plantPO1, PO2, PO3, PO4, PO5, PO7, PO3, PO4, PO5, PO