

I.C ENGINES(ME-421)

Pre-requisite: None

Credit Hours: 02

Contact Hours: 32

RECOMMENDED BOOK(S)

Internal Combustion Engine BY R.K Rajpoot

Internal Combustion Engine Fundamentals (McGraw-Hill) by John Heywood

COURSE OBJECTIVES

To learn fundamentals of I.C Engines and basic terminologies.

To learn automobiles systems and technologies.

S. No.	CLO/PLOS MAPPING	DOMAIN	PLO
1	Apply and analyze various thermodynamic cycles related to internal combustion engines and analyze combustion processes in engines	C3, C4	02
2	Specify and interpret engine design parameters as well as performance data for a variety of internal combustion engine systems	C6	03
3	Explain pollutant formation, its effect on environment and control.	C3	07

COURSE CONTENTS

Under graduate thermodynamics and combustion review

Introduction and basic engine operation processes

Engine components, operating parameters and characteristics

Ideal and real models of engine cycles

Gas exchange processes, supercharging and turbocharging

Combustion in SI and CI engines

Dual fuel system engines Role of Lubricants in SI and CI engines

Pollutant formation and control

Project presentations