SE MECHANICAL SEMESTER-II	
Name Of Subject: Fluid Mechanics	

	Course Objectives:
1	To understand various properties of fluids
2	To learn fluid statics and kinematics
3	To learn fluid dynamics and to understand Bernoulli's equation
4	To know various applications of Bernoulli's equation
5	To understand major and minor energy losses through pipes
6	To understand Boundary layer, Drag, and Lift

	Course Outcomes:
CO1	Students will be able to understand various properties of fluid & use those properties to solve problems related to fluid mechanics
CO2	Students will be able to learn fluid statics & kinematics & will be able to visualize flow field
CO3	Students will be able to conversant with fluid dynamics, understand Bernoulli's equation and use that Bernoulli's equation for solutions in fluids. Students will also learn various applications of Bernoulli's equation
CO4	Students will be able to understand laminar and turbulent flow physics and will apply the concepts of velocity and shear stress distribution for laminar and turbulent flow in a pipe
CO5	Students will be able to understand major and minor energy losses through pipes and will know the importance of dimensional analysis
CO6	Students will be able to understand concept of Boundary layer, Drag, and Lift forces and will learn how to determine drag and lift forces on immersed bodies

Name Of Subject:	Theory of Machines – I
Course Objectives:	
1	To make the student conversant with commonly used mechanism for industrial application.
2	To develop competency in conducting laboratory experiments for finding moment of inertia of rigid bodies.
3	To make the student conversant with commonly used clutches, brakes and dynamometer.
4	To develop analytical competency in solving kinematic problems using complex algebra method.
5	To develop competency in graphical and analytical method for solving problems in static and dynamic force analysis.
6	To develop competency in drawing ,velocity and acceleration diagram for simple and complex mechanisms
Course Outcomes:	
CO1	Students will be able to understand fundamentals of mechanisms in real life.
CO2	Students will be able to calculate moment of inertia and perform static and dynamic force analysis of simple mechanisms
CO3	Students will be able to understand basics of clutches, brakes and dynamometer
CO4	Student will be able to do kinematics analysis of simple mechanism by analytical method.
CO5	Students will be able to perform velocity and acceleration analysis of simple mechanism.
CO6	Students will be able to perform velocity and acceleration analysis of simple mechanism involving Coriolis component and Klein's construction

Name Of Subject:	Engineering Metallurgy
Course Objectives:	
1	To acquaint students with the basic concepts of Metal Structure
2	To impart a fundamental knowledge of Ferrous & Non Ferrous Metal Processing
3	Selection and application of different Metals & Alloys
4	To Know Fundamentals of Metallography
5	To develop futuristic insight into Metals
Course Outcomes:	
CO1	Describe how metals and alloys formed and how the properties change due to microstructure
CO2	Apply core concepts in Engineering Metallurgy to solve engineering problems.
CO3	conduct experiments, as well as to analyze and interpret data
CO4	Select materials for design and construction
CO5	Possess the skills and techniques necessary for modern materials engineering practice
CO6	Recognize how metals can be strengthened by alloying, cold-working, and heat treatment

Name Of Subject:	Applied Thermodynamics
Course Objectives:	
1	To get familiar with fundamentals of I. C. Engines, Construction and working Principle of an Engine and Compare Actual, Fuel-Air and Air standard cycle Performance.
2	To study Combustion in SI and CI engines and its controlling factor in order to extract maximum power.
3	To study emission from IC Engines and its controlling method, Various emission norms.
4	Perform Testing of I. C. Engines and methods to estimate Indicated, Brake and Frictional Power and efficiencies
5	To understand theory and performance Calculation of Positive displacement compressor.
Course Outcomes:	
CO1	Classify various types of Engines, Compare Air standard, Fuel Air and Actual cycles and make out various losses in real cycles.
CO2	Understand Theory of Carburetion, Modern Carburetor, Stages of Combustion in S. I. Engines and Theory of Detonation, Pre-ignition and factors affecting detonation
CO3	Understand Fuel Supply system, Types of Injectors and Injection Pumps, Stages of Combustion in CI Engines, Theory of Detonation in CI Engines and Comparison of SI and CI Combustion and Knocking and Factors affecting, Criteria for good combustion chamber and types.
CO4	Carry out Testing of I. C. Engines and analyze its performance
CO5	Describe construction and working of various I. C. Engine systems (Cooling, Lubrication, Ignition, Governing, and Starting) also various harmful gases emitted from exhaust and different devices to control pollution and emission norms for pollution control.
CO6	Describe construction, working of various types of reciprocating and rotary compressors with performance calculations of positive displacement compressors.

Name Of Subject:	Electrical and Electronics Engineering(EEE)
Course Objectives:	
1	To Understand Principle of operation,speed control and Applications of DC machines
2	To Understand Principle of operation and Industrial Applications of Induction Motor
3	To Understand Working principle of different special purpose motors with its applications
4	To Understand Microcontrollers,its programming Concept and IDE
5	To Understand Embedded systems terminologies and sensors
6	To Understand Data acquisition system for mechanical applications
Course Outcomes:	
CO1	To Develop the capability to identify and select suitable DC motor and its speed control methods
CO2	To Develop the capability to identify and select suitable induction motor for any applications
CO3	Exposé basic working of special purpose motors
CO4	Program Arduino IDE using basic features
CO5	To Interface Basic input output devices using Arduino IDE
CO6	To Develop Data acquisition system for mechanical applications using arduino