

Department of Mechanical Engineering			
Semester 3			
Sl.No.	Name of the Subject	CO Code	Course Outcomes
1	Linear Algebra And Complex Analysis	MA 201.1	Identify analytic functions and Harmonic functions
		MA 201.2	Identify conformal mapping and to find the regions that are mapped under certain transformations.
		MA 201.3	Evaluate real definite integrals as application of Residue theorem
		MA 201.4	Solve any given system of linear equations and to find the Eigen values of a matrix and how to diagonalize a matrix
2	Mechanics Of Solids	ME 201 .1	Acquaint with the basic concepts of stress and deformation in solids
		ME 201 .2	Analyze stress and strain in simple structural members
		ME 201 .3	Determine the stresses in simple structural members such as shafts, beams, columns etc.
		ME 201 .4	Understand principal planes and stresses, and apply the results to combined loading cases
3	Mechanics Of Fluids	ME 203.1	Idea on the mechanics of fluid motion.
		ME 203.2	Establish fundamental knowledge of basic fluid mechanics and address specific topics relevant to simple applications involving fluids
		ME 203.3	Familiarize students with the relevance of fluid dynamics to many engineering systems
		ME 203.4	Disseminate the ideas on Dimensionless analysis and similitude
4	Thermodynamics	ME 205 .1	Understand basic thermodynamic principles and laws
		ME 205 .2	Develop the skills to analyze and design thermodynamic systems
		ME 205 .3	Provide a better understanding of energy and energy related engineering systems.
		ME 205 .4	Provide the students a feel for how thermal sciences are applied in engineering practice
5	Metallurgy And Materials Engineering	ME 210.1	Familiarize with the crystal structures of metallic materials.
		ME 210.2	Examine the characteristics of metal's microstructure by visual inspection techniques.
		ME 210.3	Analyze the binary phase diagrams, heat treat treatment process and strengthening procedure of Fe-C alloys.
		ME 210.4	Recognize the stages that will lead to failures of metals on structural/thermal loading and characteristics of materials namely composites, modern engineering materials,ceramics
6	Business Economics	HS200.1	Familiarise perspective engineers with elementary principles of business economics
		HS200.2	Apply business analysis to the firm under different market conditions.
		HS200.3	Apply economic models to examine current senario and evaluate policy option for addressing economic issues.
		HS200.4	Prepare and analyse various business tools like balance shet, cost benefit analysis and rate of return at an elementary level.
Semester 4			
Sl.No.	Name of the Subject	CO Code	Course Outcomes
		MA202.1	Discrete and continuous probability density functions and special probability distributions.

1	Probability Distributions,Transforms And Numerical Methods	MA202.2	Laplace and Fourier transforms and apply them in their Engineering
		MA202.3	Numerical methods and their applications in solving engineering problems
		MA202.4	Introduce the concept of random variables, probability distributions, specific discrete and continuous distributions with practical application in various Engineering and social life situations.
2	Advanced Mechanics Of Solids	ME202.1	Apply concepts of stress and strain analyses in solids.
		ME202.2	Use the procedures in theory of elasticity at a basic level
		ME202.3	Solve general bending problems
		ME202.4	Apply energy methods in structural mechanics problems
3	Thermal Engineering	ME204 .1	Integrate the concepts, laws and methodologies from the course in thermodynamics into analysis of cyclic processes
		ME204 .2	To apply the thermodynamic concepts into various thermal application like IC engines, steam turbines, compressors.
		ME204 .3	understand air pollution from IC engines and its remedies
		ME204 .4	acquire knowledge on the working of steam turbines, IC engines and gas turbines
4	Fluid Machinery	ME206.1	Discuss the characteristics of centrifugal pump and reciprocating pumps.
		ME206.2	Calculate forces and work done by a jet on fixed or moving plate and curved plates.
		ME206.3	Know the working of turbines and select the type of turbine for an application.
		ME206.4	Do the analysis of air compressors and select the suitable one for a specific application.
5	Manufacturing Technology	ME220 .1	Acquire knowledge in various casting processes and technology related to them
		ME220 .2	Understand the rolling passes required for getting required shapes of rolled products.
		ME220 .3	Discuss the important aspects of forging techniques and sheet metal working processes.
		ME220 .4	Acquire knowledge in various types of welding processes
6	Life Skills	HS210.1	Communicate effectively.
		HS210.2	Face interview & group discussion
		HS210.3	Handle Engineering Ethics and Human Values.
		HS210.4	Write different types of reports
Semester 5			
Sl.No.	Name of the Subject	CO Code	Course Outcomes
1	MECHANICS OF MACHINERY	ME301.1	Ability to evaluate kinematics and mechanics of various mechanisms
		ME301.2	Make aware of various mechanisms and its involvement in daily life.
		ME301.3	Determination of design parameters for gears and cams.
		ME301.4	Synthesis of mechanisms
		ME303.1	Introduce students to the scientific principles underlying material behavior during manufacturing process so as to enable them to undertake calculations of forces, tool stress and MMR.

2	MACHINE TOOLS AND DIGITAL MANUFACTURING	ME303.2	Understand various machine tools such as lathe, drilling mc, reciprocating mc, and their operations.
		ME303.3	Impart knowledge of appropriate parameters to be used for various machining operations.
		ME303.4	Develop knowledge on the importance of milling grinding and super finishing in metal cutting process, and to introduce to DM
3	COMPUTER PROGRAMMING AND NUMERICAL METHODS	ME 305.1	Students will be able to write Computer Programs.
		ME 305.2	Study how to solve the numerical solutions for engineering problems.
		ME 305.3	Able to solve the system of equation and heat equations.
		ME 305.4	Able to solve the algorithm and design of various programmes
4	ELECTRICAL DRIVES AND CONTROL FOR AUTOMATION	EE311.1	Give a strong foundation on all electrical machines including DC machines, transformers,
		EE311.2	Give a strong foundation on induction motors and synchronous motors.
		EE311.3	Good grasp on working of electrical machines and transformers, and their applications.
		EE311.4	Gives a basic idea about traction and welding.
5	PRINCIPLES OF MANAGEMENT	HS300 .1	Develop ability to critically analyze and evaluate a variety of management practices in the contemporary context;
		HS300 .2	Understand and apply a variety of management and organizational theories in practice.
		HS300 .3	Able to mirror existing practices or to generate their own innovative management competencies, required for today’s complex and global workplace:
		HS300 .4	Able to critically reflect on ethical theories and social responsibility ideologies to create sustainable organizations.
6	NON DESTRUCTIVE TESTING	ME367.1	Present the basic concepts, methods, equipment, applications and limitations of NDT methods such as Visual, Penetrant Testing, Magnetic Particle Testing, UltrasonicTesting, Radiography, Eddy Current.
		ME367.2	Facilitate selection of appropriate NDT methods
		ME367.3	Understand advantages and limitations of nondestructive testing methods
		ME367.4	Study the developments and future trends in NDT .
Semester 6			
Sl.No.	Name of the Subject	CO Code	Course Outcomes
1	HEAT AND MASS TRANSFER	ME302 .1	Introduce the various modes of heat transfer
		ME302 .2	Develop methodologies for solving a wide variety of practical heat transfer problems
		ME302 .3	Provide useful information concerning the performance and design of simple heat transfer systems
		ME302 .4	Introduce mass transfer
		ME304.1	Impart knowledge on force analysis of machinery, balancing of rotating and reciprocating masses and Gyroscopes
		ME304.2	Give basic understanding of energy fluctuation in Machines.
		ME304.3	Introduce the fundamentals in vibration, vibration analysis of single degree of freedom systems.

2	DYNAMICS OF MACHINERY	ME304.4	Understand the physical significance and design of vibration systems with desired conditions
3	ADVANCED MANUFACTURING TECHNOLOGY	ME306.1	Introduce machining principles and processes in the manufacturing of precision components and products that use conventional and nonconventional technologies.
		ME306.2	Give basic understanding of the machining capabilities, limitations, and productivity of advanced manufacturing processes.
		ME306.3	Describe how PLC’s operate and how they control automated equipment and systems
		ME306.4	Introduce CNC programming and to demonstrate tool path simulations with CNC powered equipment
4	COMPUTER AIDED DESIGN & ANALYSIS	ME308.1	Gain a basic knowledge on Computer Aided Design methods and procedures.
		ME308.2	Understand the fundamentals of solid modeling.
		ME308.3	Have a basic knowledge in finite element analysis procedures.
		ME308.4	Learn various analysis methods and solution procedures.
5	METROLOGY AND INSTRUMENTATION	ME312.1	Understand the working of linear and angular measuring equipments, their principles of operations and application basic principles of measurements.
		ME312.2	Familiarize the working of optical measuring instruments, fundamentals of limits and limit gauges, fundamentals of screw thread parameters.
		ME312.3	Give an exposure to advanced measuring devices.
		ME312.4	Learn various comparators, transducers and devices used for measuring force, torque, stress-strain and temperature.
6	MARKETING MANAGEMENT	ME368.1	State the role and functions of marketing management
		ME368.2	Describe key Marketing concepts, theories and Techniques for analyzing and variety marketing situations
		ME368.3	Identify and demonstrate the dynamic nature of the environment in which marketing decisions are taken.
		ME368.4	Synthesize ideas into a marketing plan
Semester 7			
Sl.No.	Name of the Subject	CO Code	Course Outcomes
1	DESIGN OF MACHINE ELEMENTS - I	ME401.1	To review concepts of statics and strength of materials.
		ME401.2	To introduce fundamental approaches to failure prevention of components.
		ME401.3	To provide knowledge in the design of common machine elements such as fasteners, shafts
		ME401.4	To provide knowledge in the design springs cotter joints and couplings.
2	ADVANCED ENERGY ENGINEERING	ME403.1	To give an idea about global energy scenario
		ME403.2	To give an idea of conventional energy sources
		ME403.3	To understand solar, wind , Biomass energy and concepts of other renewable energy sources
		ME403.4	To create awareness on the impacts of energy conversion and importance of sustainable energy

3	REFRIGERATION & AIRCONDITIONING	ME405.1	To introduce vapour compression and vapour adsorption systems
		ME405.2	To impart knowledge on refrigeration cycles and methods to improve performance
		ME405.3	To familiarize the components of refrigeration systems & air conditioning systems
		ME405.4	To know the applications of refrigeration and air conditioning systems
4	MECHATRONICS	ME407.1	To introduce the features of various sensors used in CNC machines and robots
		ME407.2	To study the fabrication and functioning of MEMS pressure and inertial sensors
		ME407.3	To develop hydraulic/pneumatic circuit
		ME407.4	PLC program for simple applications
5	COMPRESSIBLE FLUID FLOW	ME409.1	To familiarize with behavior of compressible gas flow.
		ME409.2	To understand the subsonic flow
		ME409.3	To understand the supersonic flow
		ME409.4	To familiarize with high speed test facilities
6	CRYOGENIC ENGINEERING	ME467.1	To provide the knowledge of evolution of low temperature science
		ME467.2	To provide knowledge on the properties of materials at low temperature
		ME467.3	To familiarize with various gas liquefaction systems
		ME467.4	To provide design aspects of cryogenic storage and transfer lines
7	AUTOMOBILE ENGINEERING	ME463.5	The anatomy of the automobile in general
		ME463.6	To study working of different automotive systems and subsystems
		ME463.7	The functioning of the engine and its accessories, gear box, clutch, brakes, steering, suspension etc
		ME463.8	Study latest developments in automobiles
Semester 8			
Sl.No.	Name of the Subject	CO Code	Course Outcomes
1	DESIGN OF MACHINE ELEMENTS - II	ME402.1	Provide basic design skills with regard to clutches.
		ME402.2	Provide basic design skills with regard to brakes, belt drives, bearings.
		ME402.3	Provide basic design skills with regard to gears and connecting rod.
		ME402.4	Understand the design modifications to be considered for the ease of manufacturing.
2	INDUSTRIAL ENGINEERING	ME404.1	To impart theoretical knowledge about various tools and techniques of Industrial Engineering.
		ME404.2	To create awareness about various safety procedures to be followed in carrying out different types of projects.
		ME404.3	To get acquainted with the Inventory management Principles and Techniques.
		ME404.4	To equip the students with the theoretical knowledge of Quality control practices and testing methods.
	Material Handling & Facilities	ME476.1	To provide understanding of the overall facilities planning process
		ME476.2	To educate product, process and schedule design and their effects on the facility layout

3	Planning	ME476.3	To introduce concepts of material handling and safety in industries.
4	ENVIRONMENTAL IMPACT ASSESSMENT	CE482.1	To study the various types of environmental pollution
		CE482.2	To study the impact of various types of pollutants and their assessment techniques