



R.M.K. ENGINEERING COLLEGE

(An Autonomous Institution)

RSM Nagar, Kavaraipettai – 601 206

DEPARTMENT OF MECHANICAL ENGINEERING

COURSE OUTCOMES: ODD Semester 2023-24



List of Courses

S. No.	Regulation	Semester	Category of Courses	Course Code / Course Name
1.	R2022 (Students admitted during 2022-23)	3	Theory	22GE201 - Tamils and Technology
2.		3	Theory	22MA303 - Fourier Analysis and Partial Differential Equation
3.		3	Theory	2ME301 - Thermodynamics and Power Generation
4.		3	Theory with Lab Component	22ME302 - Science of Engineering Materials
5.		3	Theory with Lab Component	22ME303 - Mechanical Engineering Tools
6.		3	Theory with Lab Component	22ME304 - Fluid Mechanics and Machinery
7.		3	Practical	22ME311 - Product Development Lab – 3 (Design and Analysis Phase)
8.		3	Employability Enhancement Courses	22CS311 - Aptitude and Coding Skills I
9.		3	Employability Enhancement Courses	22ME312 - Internship/Seminar
10.	R2020 (Students admitted during 2021-22)	5	Theory with Lab Component	20ME506 - Thermal Engineering- II
11.		5	Theory	20ME502 - Design of Machine Elements
12.		5	Theory	20ME503 - Dynamics of Machines
13.		5	Theory	20ME507 - Basics of Product Lifecycle Management
14.		5	Theory	20ME901 - Automobile Engineering (Professional Elective – I)
15.		5	Practical	20ME511 - Kinematics and Dynamics Laboratory
16.		5	Practical	20ME514 - Product Lifecycle Management Laboratory
17.		5	Employability Enhancement Courses	20CS512 - Advanced Aptitude and Coding Skills – I

S. No.	Regulation	Semester	Category of Courses	Course Code / Course Name
18.	R2020 (Students admitted during 2020-21)	7	Theory	20ME701 - Power Plant Engineering
19.		7	Theory	20ME702 - Process Planning and Cost Estimation
20.		7	Theory	20ME703 - Introduction to Business Intelligence and Analytics, Advanced Integration techniques
21.		7	Theory	20EE702 - Conventional and Renewable Energy Systems (Open Elective – II)
22.		7	Theory	20ME919 – Mechatronics (Professional Elective – III)
23.		7	Theory	20ME928 - Entrepreneurship Development (Professional Elective – IV)
24.		7	Practical	20ME711 - Simulation and Analysis Laboratory
25.		7	Practical	20ME712 - Mechatronics Laboratory
26.		7	Practical	20ME713 Mini project and Comprehension

COURSE OUTCOMES
SECOND YEAR - SEMESTER: 03
REGULATION: 2022 (2022-23)

Semester: III Course Name: 22GE201 - Tamils and Technology

S. No.	Course Outcomes	COs
C201.1	Identify the role of weaving and ceramic technology in ancient Tamil Culture.	CO1
C201.2	Assess the design and construction technology ideas in the current Tamil society.	CO2
C201.3	Identify the different types of manufacturing technology used in Tamil society and their significance.	CO3
C201.4	Classify agricultural and irrigation technologies in ancient Tamil society and its current relevance.	CO4
C201.5	Discuss the fundamentals of scientific Tamil and Tamil computing	CO5

Semester: III Course Name: 22MA303 - Fourier Analysis and Partial Differential Equation

S. No.	Course Outcomes	COs
C202.1	Find the Fourier series of periodic functions.	CO1
C202.2	Compute the Fourier transform of prescribed functions.	CO2
C202.3	Solve first order partial differential equations.	CO3
C202.4	Determine the solutions of higher order partial differential equations.	CO4
C202.5	Apply the concept of Fourier series to solve heat and wave equations.	CO5

Semester: III Course Name: 22ME301 - Thermodynamics and Power Generation

S. No.	Course Outcomes	COs
C203.1	Explain the basic concepts and laws of thermodynamics	CO1
C203.2	Apply second law of thermodynamics to open and closed systems and calculate entropy in thermal systems.	CO2
C203.3	Calculate the properties of pure substance and explain the working of steam cycles.	CO3
C203.4	Distinguish the performance of different air standard cycles & gas power cycles.	CO4
C203.5	Discuss the concepts to improve the performance of Gas turbines.	CO5
C203.6	Examine the performance of compressors & IC Engines.	CO6

Semester: III Course Name: 22ME302 - Science of Engineering Materials

S. No.	Course Outcomes	COs
C204.1	Perform phase equilibrium calculation and construct phase diagram.	CO1
C204.2	Select suitable ferrous and non-ferrous materials for engineering application.	CO2
C204.3	Explain the various heat treatment processes that can be applied for different ferrous and non-ferrous alloys.	CO3
C204.4	Classify the various case hardening treatments and analyse the effect of various case hardening treatments on the metals and alloys.	CO4
C204.5	Understand the basics concepts and types of composite materials.	CO5
C204.6	Apply the heat treatment and surface treatment process for the metals	CO6

Semester: III Course Name: 22ME303 - Mechanical Engineering Tools

S. No.	Course Outcomes	COs
C205.1	Explain the various manufacturing processes used for fabricating the components.	CO1
C205.2	Apply the theory of metal cutting for effective machining and summarize the working principle of various types of lathes.	CO2
C205.3	Demonstrate the working of special type machine tools.	CO3
C205.4	Discuss various types of gear manufacturing and surface finishing process	CO4
C205.5	Prepare NC codes for a machining program	CO5
C205.6	Apply the concept of manufacturing processes for making mechanical Product / working model.	CO6

Semester: III Course Name: 22ME304 - Fluid Mechanics and Machinery

S. No.	Course Outcomes	COs
C206.1	Calculate the fluid properties.	CO1
C206.2	Analyze fluid flows and the application of basic fluid-flow principles.	CO2
C206.3	Compute the flow of fluid in circular conduits.	CO3
C206.4	Estimate the performance of hydraulic turbines.	CO4
C206.5	Explain the working principle and draw the performance curves of hydraulic pumps.	CO5
C206.6	Demonstrate the working of hydraulic turbines and pumps.	CO6

**Semester: III Course Name: 22ME311 - Product Development Lab – 3
(Design and Analysis Phase)**

S. No.	Course Outcomes	COs
C207.1	Enhance their skills in design concepts, rules and procedures.	CO1
C207.2	Develop their cognitive strategy to think, organize, learn and behave.	CO2
C207.3	Demonstrate the ability to provide conceptual design strategies for a product.	CO3
C207.4	Describe the procedure for designing a Mock-up model.	CO4
C207.5	Recognize and apply appropriate interdisciplinary and integrative strategies for solving complex problems.	CO5

Semester: III Course Name: 22CS311 - Aptitude and Coding Skills I

S. No.	Course Outcomes	COs
C208.1	Develop vocabulary for effective communication and reading skills.	CO1
C208.2	Build the logical reasoning and quantitative skills.	CO2
C208.3	Develop error correction and debugging skills in programming.	CO3

COURSE OUTCOMES
THIRD YEAR - SEMESTER: 05
REGULATION: 2020 (Admitted in 2021-22)

Semester V

Course Name: 20ME506 - Thermal Engineering- II

S. No.	Course Outcomes	COs
C301.1	Discuss various types of steam nozzles and their flow characteristics.	CO1
C301.2	Explain the functioning and features of different types of Boilers and to examine the performance of the boilers.	CO2
C301.3	Calculate the Performance of steam turbines in power generation to perform energy balance.	CO3
C301.4	Summarize the concept of Cogeneration, working features of heat pumps and Heat Exchangers.	CO4
C301.5	Compute the cooling load for air conditioning COP of refrigeration systems and to study the refrigerator components.	CO5
C301.6	Apply thermal engineering principles to examine the performance of various thermal systems.	CO6

Semester: V

Course Name: 20ME502 - Design of Machine Elements

S. No.	Course Outcomes	COs
C302.1	Compute the stress acting on various machine elements.	CO1
C302.2	Discuss the dimensions, stress requirements of shaft and couplings based on various load conditions.	CO2
C302.3	Predict appropriate bearing, from the standard catalog for varied applications.	CO3
C302.4	Demonstrate the dimensions of the energy storing devices for specific applications.	CO4
C302.5	Summarize the temporary and permanent joints based on application requirements.	CO5
C302.6	Apply the various design concepts on to real time product applications.	CO6

Semester: V**Course Name: 20ME503 - Dynamics of Machines**

S. No.	Course Outcomes	COs
C303.1	Calculate the dynamic forces in mechanisms.	CO1
C303.2	Compute the balancing masses and their locations in reciprocating and rotating masses.	CO2
C303.3	Discuss the importance of the frequencies of free vibration.	CO3
C303.4	Estimate the frequency of forced vibration and damping coefficient.	CO4
C303.5	Explain the working principle and calculate the speed and lift of the governor and estimate the gyroscopic effect on automobiles, ships and airplanes.	CO5
C303.6	Demonstrate a keen understanding of the force analysis of Mechanisms to calculate the unbalanced forces and consequent vibrations to facilitate their design for smooth operations.	CO6

Semester: V**Course Name: 20ME507 - Basics of Product Lifecycle Management**

S. No.	Course Outcomes	COs
C304.1	Illustrate the need and importance of New Product Development.	CO1
C304.2	Summarize the essentials of Product Lifecycle Management.	CO2
C304.3	Recognize the components of Product Lifecycle Management.	CO3
C304.4	Infer the role of PDM in Product Lifecycle Management.	CO4
C304.5	Extend the knowledge on PLM to Enterprise integration and Customization.	CO5
C304.6	Use PLM technology to develop new products.	CO6

Semester: V**Course Name: 20ME901 - Automobile Engineering**

S. No.	Course Outcomes	COs
C305.1	Recognize the various parts of the automobile and their functions and materials.	CO1
C305.2	Discuss the engine auxiliary systems and engine emission control.	CO2
C305.3	Distinguish the working of different types of transmission systems.	CO3
C305.4	Differentiate the Steering, Brakes and Suspension Systems.	CO4
C305.5	Use the possible alternate sources of energy for IC Engines.	CO5
C306.6	Explain the upcoming technology related to E – Vehicle and Autonomous vehicle.	CO6

Semester: V Course Name: 20ME511 - Kinematics and Dynamics Laboratory

S. No.	Course Outcomes	COs
C306.1	Explain the kinematics of various mechanisms and parameters related to toothed gearing and gear trains.	CO1
C306.2	Determine mass moment of inertia using turn table apparatus, bifilar suspension, compound pendulum etc.	CO2
C306.3	Discuss the whirling phenomena of shafts, vibration of beams and spring - mass system, balancing of rotating and reciprocating masses.	CO3
C306.4	Compute the torsional frequency of single and double rotor systems, Transmissibility ratio using vibrating table.	CO4
C306.5	Demonstrate the gyroscopic effect, effort and sensitivity of various types of Governors.	CO5
C306.6	Illustrate the concepts of mechanisms and vibrations through miniature projects	CO6

Semester: VI Course Name: 20ME514 Product Lifecycle Management Laboratory

S. No.	Course Outcomes	COs
C307.1	Explain the installation and maintenance procedure of software related to PLM.	CO1
C307.2	Understand the PLM and PDM functions in executing the task of enterprise.	CO2
C307.3	Demonstrate workflow, Project and search in PLM environment.	CO3
C307.4	Describe the case studies in detail.	CO4
C307.5	Discuss the PLM software interface.	CO5
C307.6	Illustrate design file integration with Windchill.	CO6

Semester: V Course Name: 20CS512 - ADVANCED APTITUDE AND CODING SKILLS - I

S. No.	Course Outcomes	COs
C308.1	Develop vocabulary for effective communication and reading skills.	CO1
C308.2	Build the logical reasoning and quantitative skills.	CO2
C308.3	Develop error correction and debugging skills in programming.	CO3

COURSE OUTCOMES
FOURTH YEAR - SEMESTER: 07
REGULATION: 2020 (2020-21)

Semester: VII

Course Name: 20ME701 - Power Plant Engineering

S. No.	Course Outcomes	COs
C401.1	Analyse various aspects of a Thermal Power Plant and its components.	CO1
C401.2	Interpret the Systems viz. Fuel and Ash Handling, Draught, Feed Water, Cogeneration etc. associated with a Thermal Power Plant.	CO2
C401.3	Exemplify Diesel, Gas Turbine and Combined Cycle Power Plants besides analysis of Air Standard Cycles.	CO3
C401.4	Infer the Working Operation of various Nuclear Reactors and Magneto Hydro Dynamic power generation.	CO4
C401.5	Discuss environmental aspects and alternate sources of energy to reduce pollution.	CO5
C401.6	Evaluate various factors of power. Calculate power generation cost.	CO6

Semester: VII Course Name: 20ME702 - Process Planning and Cost Estimation

S. No.	Course Outcomes	COs
C402.1	Associate the knowledge of engineering fundamentals for process planning and its activities.	CO1
C402.2	Distinguish various process planning tool and its applications.	CO2
C402.3	Discuss the various elements involved in costing.	CO3
C402.4	Estimate the product cost of various manufacturing methods.	CO4
C402.5	Calculate the Machining time for various operations carried out in different machines.	CO5
C402.6	Apply the concept of Process planning and cost estimation for various production process.	CO6

Semester: VII

Course Name: 20ME703 - Introduction to Business Intelligence and Analytics, Advanced Integration techniques

S. No.	Course Outcomes	COs
C403.1	Describe the need for Industry4.0 and the associated technologies.	CO1
C403.2	Explain the process of integrating PLMwithIndustry4.0.	CO2
C403.3	Understand the basic concepts of Digital Twin.	CO3
C403.4	Illustrate the features and types of Digital Twin.	CO4
C403.5	Discuss the technologies of Digital Thread.	CO5
C403.6	Explain the importance of advanced tools and techniques for business integration.	CO6

**Semester: VII Course Name: 20EE702 - Conventional and Renewable Energy Systems
(Open Elective –II)**

S. No.	Course Outcomes	COs
C404.1	Create awareness about conventional and renewable energy sources and technologies.	CO1
C404.2	Get adequate inputs on a variety of issues in harnessing renewable energy.	CO2
C404.3	Recognize current and possible future role of renewable energy sources.	CO3
C404.4	Explain the various renewable energy resources and technologies and their applications.	CO4
C404.5	Understand basics about biomass energy.	CO5
C404.6	Acquire knowledge about solar energy.	CO6

Semester: VII Course Name: 20ME919 – Mechatronics (Professional Elective - III)

S. No.	Course Outcomes	COs
C405.1	Discuss the interdisciplinary applications of Electronics, Electrical, Mechanical and Computer Systems for the Control of Mechanical, Electronic Systems and Sensor technology.	CO1
C405.2	Explain the architecture of Microprocessor and Microcontroller, Pin Diagram, Addressing Modes of Microprocessor and Microcontroller.	CO2
C405.3	Demonstrate the Programmable Peripheral Interface, Architecture of 8255 PPI, and various device interfacing.	CO3
C405.4	Explain the architecture, programming and application of programmable logic controllers to problems and challenges in the areas of Mechatronic engineering.	CO4
C405.5	Summarize the various Actuators and Mechatronics system using the knowledge and skills acquired through the course and also from the given case studies.	CO5
C405.6	Design and develop the mechatronics system for the suitable applications.	CO6

**Semester: VII Course Name: 20ME928 - Entrepreneurship Development
(Professional Elective - IV)**

S. No.	Course Outcomes	COs
C406.1	Understand the role of entrepreneur in economic growth of the nation.	CO1
C406.2	Explain the major motivation factors for becoming an entrepreneur.	CO2
C406.3	Classify, compare and analyze for setting up of a good business opportunity.	CO3
C406.4	Summarize the various sources of finance and method of accounting.	CO4
C406.5	Establish business opportunity with the knowledge on Government taxation norms.	CO5
C406.6	Apply the knowledge for expanding business.	CO6

Semester: VII Course Name: 20ME711 - Simulation and Analysis Laboratory

S. No.	Course Outcomes	COs
C407.1	Apply the fundamentals concepts of the finite element method in problem characterization.	CO1
C407.2	Compute the deflection and stress in 1D and 2D problem.	CO2
C407.3	Explain the effect of various load acting on 1D beam in real-time problem.	CO3
C407.4	Examine the modal analysis for a beam under various boundary conditions.	CO4
C407.5	Demonstrate the effects due to harmonic loading on structures.	CO5
C407.6	Examine the thermal effects on 2D structure.	CO6

Semester: VII Course Name: 20ME712 - Mechatronics Laboratory

S. No.	Course Outcomes	COs
C408.1	Examine various fluid power circuits.	CO1
C408.2	Experiment Hydraulic, Pneumatic and electro pneumatic circuits using software tool.	CO2
C408.3	Prepare PLC programs for controlling multiple cylinders using timers.	CO3
C408.4	Demonstrate the speed control of DC motor by microcontroller.	CO4
C408.5	Use programmable peripheral interface for stepper motor and traffic light.	CO5
C408.6	Summarize assembly language programming of 8085 for arithmetic operation.	CO6

Semester: VII Course Name: 20ME713 - Mini project and Comprehension

S. No.	Course Outcomes	COs
C409.1	Apply the concept of manufacturing processes for making mechanical product / working model.	CO1
C409.2	Demonstrate the working model of the machine element or the mechanical product.	CO2
C409.3	Discuss various applications of engineering materials.	CO3
C409.4	Summarize the basics of core engineering concepts.	CO4
C409.5	Apply the various engineering concepts in day to day life.	CO5
C409.6	Understand and comprehend any given problem related to mechanical engineering.	CO6



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Department of Mechanical Engineering
COURSE OUTCOMES: EVEN Semester 2023-24



S. No.	Regulation	Semester	Category of Courses	Course Code / Course Name
1	R2022 (Students admitted during the academic year 2022-23)	4	Theory	22GE301 - Universal Human Values – 2: Understanding Harmony
2		4	Theory	22MA403 - Statistics and Boundary Value Problems
3		4	Theory	Professional Elective - I
4		4	Theory with Lab Component	22ME401 - Applied Thermal Engineering
5		4	Theory with Lab Component	22ME402 - Solid Mechanics and Design
6		4	Theory with Lab Component	22ME403 - Smart Manufacturing
7		4	Practical	22ME411 - Product Development Lab – 4 (Prototype Phase)
8		4	Employability Enhancement Courses	22CS411 - Aptitude and Coding Skills II
9	R2020 (Students admitted during the academic year 2021-22)	6 R2020 (2021-22)	Theory with Lab Component	20ME605 - Computer Aided Design and Manufacturing
10		6	Theory	20ME601 - Design of Transmission Systems
11		6	Theory	20ME606 - Advanced Product Lifecycle Management
12		6	Theory	Open Elective – I
13		6	Theory	Professional Elective – II
14		6	Practical	20ME612 - Design and Fabrication Project and Internship
15		6	Practical	20ME614 - Advanced Product Lifecycle Management Laboratory
16		6	Practical	20CS614 - Advanced Aptitude and Coding Skills II
17	R2020 (Students admitted during 2020-21)	8	Employability Enhancement Courses	20ME811 - Project work

COURSE OUTCOMES
SECOND YEAR - SEMESTER: 04
REGULATION – 2022 (2022-23)

**Semester: IV Course Name: 22GE301 - Universal Human Values – 2:
Understanding Harmony**

S. No.	Course Outcomes	COs
C210.1	be aware of themselves, and their surroundings (family, society, nature).	CO1
C210.2	be more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind.	CO2
C210.3	have better critical ability.	CO3
C210.4	become sensitive to their commitment towards what they have understood (human values, human relationships, and human society).	CO4
C210.5	be able to apply what they have learnt to their own self in different day-to-day settings in real life, at least a beginning would be made in this direction.	CO5

Semester: IV Course Name: 22MA403 - Statistics and Boundary Value Problems

S. No.	Course Outcomes	COs
C211.1	Apply the concept of testing the hypothesis.	CO1
C211.2	Implement the concept of analysis of variance for various experimental designs.	CO2
C211.3	Demonstrate the control charts for variables and attributes.	CO3
C211.4	Solve the initial value problems using numerical techniques.	CO4
C211.5	Determine the numerical solutions of boundary value problems	CO5

Semester: IV Course Name: 22ME402 - 22ME401 - Applied Thermal Engineering

S. No.	Course Outcomes	COs
C213.1	Discuss various types of steam nozzles and their flow characteristics	CO1
C213.2	Calculate the performance parameters of IC Engines and its associated systems.	CO2
C213.3	Explain the functioning and features of different types of Boilers along with their auxiliaries required to compute performance parameters	CO3
C213.4	Calculate the Performance of steam turbines in power generation	CO4
C213.5	Compute the cooling load for air conditioning and COP of refrigeration systems	CO5
C213.6	Apply thermal engineering principles to examine the performance of various thermal systems.	CO6

Semester: IV

Course Name: 22ME402 - Solid Mechanics and Design

S. No.	Course Outcomes	COs
C214.1	Apply the Fundamental Design concepts.	CO1
C214.2	Estimate the stresses, strains and deformations in solids under axial loading.	CO2
C214.3	Compute the bending and shearing stresses in beams subjected to loadings.	CO3
C214.4	Examine the effect of torsion in shafts and springs.	CO4
C214.5	Compute the two-dimensional stresses in thin cylinder and spherical shells.	CO5
C214.6	Calculate the stresses and deformation of solids subjected to various loads.	CO6

Semester: IV Course Name: 22ME403 - Smart Manufacturing

S. No.	Course Outcomes	COs
C215.1	Describe the product cycle, 2D and 3D transformations, CAD/CAM concepts	CO1
C215.2	Interpret the fundamentals of parametric curves, surfaces and Solids	CO2
C215.3	Use the different types of Standard systems used in CAD	CO3
C215.4	Summarize the types of techniques used in Cellular Manufacturing and FMS	CO4
C215.5	Explain the basic types of additive manufacturing process.	CO5
C215.6	Discuss the 3D Modelling procedure of the part.	CO6

Semester: IV Course Name: 22ME411 - Product Development Lab – 4 (Prototype Phase)

S. No.	Course Outcomes	COs
C216.1	Identify the real-time problems through literature.	CO1
C216.2	Develop feasible solutions for the problems.	CO2
C216.3	Evaluate the methods to develop solutions to the problem.	CO3
C216.4	Analyze the business opportunities for a new product.	CO4
C216.5	Prepare a detailed report for the experimental dissemination	CO5

Semester: IV Course Name: 22CS411 - Aptitude and Coding Skills II

S. No.	Course Outcomes	COs
C217.1	Develop advanced vocabulary for effective communication and reading skills.	CO1
C217.2	Build an enhanced level of logical reasoning and quantitative skills.	CO2
C217.3	Develop error correction and debugging skills in programming.	CO3
C217.4	Apply data structures and algorithms in problem solving	CO4

COURSE OUTCOMES
THIRD YEAR – SEMESTER: 06
REGULATION – 2020 (2021-22)

Semester VI Course Name: 20ME605 - Computer Aided Design and Manufacturing

S. No.	Course Outcomes	COs
C309.1	Describe the product cycle, 2D and 3D transformations, CAD/CAM concepts.	CO1
C309.2	Interpret the fundamentals of parametric curves, surfaces and Solids.	CO2
C309.3	Use the different types of Standard systems used in CAD	CO3
C309.4	Summarize the types of techniques used in Cellular Manufacturing and FMS	CO4
C309.5	Explain the basic types of additive manufacturing process.	CO5
C309.6	Apply the CAD Packages in Design and manufacturing process	CO6

Semester: VI Course Name: 20ME601 - Design of Transmission Systems

S. No.	Course Outcomes	COs
C310.1	Understand the concepts of design to belts, chains and rope drives.	CO1
C310.2	Explain the concepts of design to spur, helical gears.	CO2
C310.3	Discuss the concepts of design to worm and bevel gears.	CO3
C310.4	Summarize and apply the concepts of design to gear boxes.	CO4
C310.5	Demonstrate the concepts of advanced transmission systems	CO5
C310.6	Apply the design procedures in their projects	CO6

Semester: VI Course Name: 20ME606 - Advanced Product Lifecycle Management

S. No.	Course Outcomes	COs
C311.1	Discuss the PLM architecture and data management	CO1
C311.2	Explain the steps involved in maintenance of PLM Tools	CO2
C311.3	Describe and Classify the varies ways of data representation	CO3
C311.4	Demonstrate the PLM configuration and integration with CAM.	CO4
C311.5	Illustrate the Integration of CAM with PLM	CO5
C311.6	Distinguish the data interfaces, GD&T, annotations, manufacturing notes, Integration of CAM with PLM.	CO6

Semester: VI Course Name: 20ME612 - Design and Fabrication Project and Internship

S. No.	Course Outcomes	COs
C314.1	Design and fabricate the machine element or the mechanical product.	CO1
C314.2	Demonstrate the working model of the machine element or the mechanical product	CO2
C314.3	Interpret the working of mechanical engineering systems.	CO3
C314.4	Develop the ability to solve a specific problem right from its identification.	CO4
C314.5	Identify the realization of a product, conceptualized and designed by him.	CO5
C314.6	Ability to solve real life challenges in the workplace by analyzing work environment and conditions, and selecting appropriate skill sets acquired from the course	CO6

**Semester: VI Course Name: 20ME614 - Advanced Product Lifecycle Management
Laboratory**

S. No.	Course Outcomes	COs
C315.1	Use customization to create a newer design in PLM platform.	CO1
C315.2	Describe the PDM functions in managing workflows of an enterprise.	CO2
C315.3	Apply the various CAD tool integration for effective data transfer/management.	CO3
C315.4	Illustrate the Testing and certify the projects through various test methods.	CO4
C315.5	Demonstrate the CAD integration tool.	CO5
C315.6	Explain the process involved in Data Migration.	CO6

Semester: VI Course Name: 20CS614 - Advanced Aptitude and Coding Skills – II

S. No.	Course Outcomes	COs
C316.1	Develop advanced vocabulary for effective communication and reading skills.	CO1
C316.2	Build an enhanced level of logical reasoning and quantitative skills.	CO2
C316.3	Develop error correction and debugging skills in programming.	CO3
C316.4	Apply data structures and algorithms in problem solving.	CO4

COURSE OUTCOMES
FOURTH YEAR - SEMESTER: 08
REGULATION – 2020 (2020-21)

Semester VIII Course Name: 20ME811 - Project Work

S.No.	Course Outcomes	COs
C410.1	Understand and explain the real time problems through literatures.	CO1
C410.2	Analyze the methods to develop solution to the systems.	CO2
C410.3	Classify, compare and analyze business opportunities for a new product.	CO3
C410.4	Summarize and prepare reports for the experimental determinations.	CO4
C410.5	Evaluate the performance and effectiveness of the existing systems.	CO5
C410.6	Apply the knowledge expanding business through new product design and development.	CO6