DEPARTMENT OF MECHATRONICS ENGINEERING

Regulation-2017 Course Outcomes

S.No	Year/ Sem	Course Category	Course Code & Name	Course Outcome	
1	IV/VII	Core	ME8691 & Computer Aided Design and Manufacturing	CO1	Explain the 2D and 3D transformations, clipping algorithm, Manufacturing models and Metrics
				CO2	Explain the fundamentals of parametric curves, surfaces and Solids
				CO3	Summarize the different types of Standard systems used in CAD
				CO4	Apply NC & CNC programming concepts to develop part programme for Lathe & Milling Machines
				CO5	Summarize the different types of techniques used in Cellular Manufacturing and FMS
2		Core	MT8701 & Robotics and Machine Vision System	CO1	Express the basic concepts, laws, components and parameters of robots
				CO2	Explain the types of grippers and its functions.
				CO3	Evaluate the kinematic calculations and apply Lagrangian and Newton-Euler methods to analyse dynamic characteristics of robots
				CO4	Describing the various programming techniques used in industrial robots
				CO5	Basis of machine vision and apply the concept of image processing
3		Core	MT8791 & Embedded System Design	CO1	Explain the need of embedded systems and their development procedures.
				CO2	Summaries the concepts involved in Real time operating systems.
				CO3	Use various tools for developing embedded applications.
				CO4	Explain the construction, addressing modes and instructions sets of PIC micro controller.
				CO5	Conduct experiments with I/O systems used in embedded systems
4		OPEN ELECTIVE - II	OML751 & Testing of Materials	CO1	Identify suitable testing technique to inspect industrial component
				CO2	Ability to use the different technique and know its applications and limitations
				CO3	Ability to use the different technique of Non-destructive testing
				CO4	Hence an understanding of the material characterization testing
				CO5	Understand the concepts of Various testing System.

		Professional Elective	GE8077 & Total Quality Management	CO1	Explain the importance of quality and Deming's philosophy.
				CO2	Describe the process of continuous improvement.
				CO3	Apply traditional and quality management tools and techniques to manufacture and service process.
				CO4	Develop Java applications with threads and generics classes
				CO5	Access the implementation of ISO 9000/9001-2008, 14000 for manufacturing and service sector.
		Professional Elective	GE8074 & Human Rights	CO1	Explain the meaning and Development of Human Rights
				CO2	Evaluation of the concept of Human Rights and Universal Declaration of HR
				CO3	Explain the theories of UN Laws and UN Agencies
				CO4	Describe the concept of Human Rights in India
				CO5	Describe the Human Disadvantaged People and Role of NGO's
		Core	MT8711 & Computer Aided Design and Manufacturing Laboratory	CO1	Model and assemble a given three dimensional engineering components
				CO2	Perform various analyses on simple structures for the application of different loads.
				CO3	Generate CNC programs for a given components to work with CNC machines
		Core	MT8781 Robotics Laboratory	CO1	Use of any robotic simulation software to model the different types of robots
				CO2	Ability to calculate work volume for different robots
				CO3	Ability to write programming for simple operations
	IV/VIII	Core	MT8801 & Automotive Electronics	CO1	Know the importance of emission standards in automobiles.
				CO2	Understand the electronic fuel injection/ignition components and their function.
				CO3	Choose and use sensors and equipment for measuring mechanical quantities, temperature and appropriate actuators.
				CO4	Diagnose electronic engine control systems problems with appropriate diagnostic tools.
				CO5	Analyses the chassis and vehicle safety system.
		Professional Elective	MG8091 Entrepreneurship Development	CO1	Students will be able to gain knowledge and skills needed to run a business successfully
				CO2	Major Motives Influencing an Entrepreneur
				CO3	Use various entrepreneurship models
				CO4	Understand various financing and accounting management in entrepreneurship
				CO5	Understand various schemes supporting entrepreneurship
		Professional Elective	GE8076 Professional Ethics in Engineering	CO1	Describe the human values with regard to the individual lifestyle for the society
				CO2	Explain the role of ethics to the engineering field
				CO3	Describe how engineering is applied in association with ethics based on engineering experimentation
				CO4	Explain the engineering ethics-based safety, responsibilities and rights
				CO5	Discuss the global issues of professional ethics in engineering
		Core	MT8811 & Project Work	CO1	Take up any challenging practical problems
				CO2	Formulate proper methodology to solve problems
				CO3	Find solution to real world problems