

**DEPARTMENT OF ELECTRONICS, MES COLLEGE MARAMPALLY**

**Program outcomes, Program specific outcomes and Course outcomes**

**PROGRAMME: MSc. ELECTRONICS**

**PROGRAMME OUTCOME (PO)**

**PO1:** To acquire technical exposure, nurturing of career improvement/ advancement in the Electronics field .

**PO2:** To inculcate research aptitude of our young scholars.

**PO3:** To develop a sense of human values and social consciousness.

**PROGRAMME SPECIFIC OUTCOME (PSO)**

**PSO1:** The course contents are intended to give the students a holistic and pragmatic view of the present scenario of the Electronics Industry.

**PSO2:** The course gives grounding in the concepts and theories that will shape the future of the Electronics Industry by giving due consideration to environment protection and sustainability.

**COURSE OUTCOME (CO)**

**FIRST SEMESTER**

**Course: ELECTRONIC DEVICES AND CIRCUIT DESIGN**

**CO1:** To equip the students with circuit level application concepts Electronic Devices.

**CO2:** To equip the students to excel l in the design of Analog Electronic circuits.

**CO3:** To equip the students to excel l in the design of Digital Electronic circuits.

**Course: MODERN COMMUNICATION SYSTEMS**

**CO1:** To equip the student to understand basics of Digital communication and its applications

**CO2:** To equip the student to understand basics of Fiber Optics & Mobile Communication.

**CO3:** To equip the student to understand basics of Satellite Communication & Radar Systems

**Course: ADVANCED NETWORKS AND SYSTEMS**

**CO1:** To equip the student to understand basic and advanced networks.

**CO2:** To equip the student to understand Laplace and Fourier Transforms

**CO3:** To equip the student to understand how passive Networks are Synthesized.

**Course: MEMS AND POWER ELECTRONICS**

**CO1:** To equip the student to understand Principles of MEMS and its fabrication.

**CO2:** To equip the student to understand the Power Electronics Devices and Circuits.

**Course: ADVANCED ELECTRONICS LAB AND POWER ELECTRONICS LAB**

**CO1:** To equip the student to get practical knowledge in designing the Digital Electronics Circuits like

**CO2:** To acquire practical knowledge in Integrated Circuits which are having importance in the application of Electronics.

**CO3:** To equip the student to familiarize the controlling of high power equipment.

**CO4:** To equip the student to familiarize the different communication and modulation techniques.

**SECOND SEMESTER**

**Course: DIGITAL SIGNAL PROCESSING AND APPLICATIONS**

**CO1:** To equip the student to understand the basics of Digital Signal Processing.

**CO2:** To equip the student to understand the basics of Image Processing

**CO3:** To equip the student to understand the various Coding Standards.

**Course: MICROCONTROLLERS AND EMBEDDED SYSTEM**

**CO1:** To equip the student to understand different Microcontrollers.

**CO2:** To equip the student for Programming and Interfacing the Microcontrollers.

**CO3:** To equip the student to understand different Simulators.

**Course: ROBOTICS AND MECHATRONICS**

**CO1:** To equip the student to understand basics of Robotics.

**CO2:** To equip the student to understand different types of Sensors and Actuators.

**CO3:** To equip the student to understand basics of Mechatronics

**Course: VLSI DESIGN AND ANALYSIS**

**CO1:** To equip the student to understand basics of MOS Technology

**CO2:** To equip the student to understand the MOS Circuit Design Process and Layout.

**CO3:** To give an introduction to the VHDL Programming Language.

**Course: MICROCONTROLLER AND SIGNAL PROCESSING LAB**

**CO1:** To equip the student to Interface Peripherals with AVR Microcontroller.

**CO2:** To equip the student to familiarize various tool boxes in MATLab.

### **THIRD SEMESTER**

#### **Course: OPTICAL COMMUNICATION TECHNIQUES**

**CO1:** To equip the student to understand the Fiber Structure, Waveguiding and Signal Degradation.

**CO2:** To equip the student to understand the Power Launching , Coupling in Optical Fibers &Photodetectors.

**CO3:** To equip the student to understand the Optical NetworkMeasurement&Monitoring Techniques.

#### **Course:PROGRAMMING IN C++**

**CO1:** To equip the student to understand the Object Oriented Programming concepts.

**CO2:** To equip the student to understand the Inheritance, Polymorphism and Pointers.

**CO3:** To equip the student to understand the Files.

#### **Course: DATA COMMUNICATION AND INTERNET TECHNOLOGY**

**CO1:** To equip the student to understand the Data Communication System.

**CO2:** To equip the student to understand the Error Control, Data Link Control & Multiple Access in Data Communication Systems.

**CO3:** To equip the student to understand the LANs and Internetworking.

#### **Course: CONTROL SYSTEMS**

**CO1:** To equip the student to understand the Mathematical Models of Physical Systems.

**CO2:** To equip the student to understand the Time Response Analysis and Stability Analysis.

#### **Course: C++ PROGRAMMING LAB**

**CO1:** To equip the student with the Programming skills.

**CO2:** To equip the student to with the Programming in Graphics.

**CO1:** To equip the student to Interface Peripherals.

### **FOURTH SEMESTER**

#### **Course: ADVANCED EMBEDDED SYSTEMS**

**CO1:** To equip the student to understand the ARM Architecture and Programming.

**CO2:** To equip the student to understand the Basic Concepts in VHDL.

**CO3:** To equip the student to understand the Modeling and Features in VHDL.

**Course: SECURE COMMUNICATION**

**CO1:** To provide a practical survey of the principles and practice of cryptography

**CO2:** To equip the student to understand the network security.

**Course: BIOMEDICAL ELECTRONICS AND BIOSENSORS**

**CO1:** To get a basic understanding of fundamental principles of Biomedical Instrumentation.

**CO2:** To equip the student to understand different Measuring Techniques.

**CO3:** To equip the student to understand different Biosensors.

**Course: VHDL PROGRAMMING LAB**

**CO1:** To equip the student to Design and simulation of Combinational Logic Circuit circuit using VHDL.

**CO2:** To equip the student to Design and simulation of Sequential logic circuit using VHDL.