M.G.M'S COLLEGE OF ENGINEERING, NANDED

Department of Electronics and Telecommunications Engineering

Course Outcome Statements

After successful completion of course, students will be able to

SY Odd Semester (2020-21)	
C201 Mathematics-III	
C201.1	Apply the Laplace Transform technique to evaluate integrals, differential equations and their applications to engineering problems.
C201.2	Demonstrate the concept of Partial Differential Equation and their applications to engineering problems.
C201.3	Apply the Fourier Transform technique to evaluate improper integral and their applications to engineering problems.
C201.4	Identify the analytic function and their applications to solve complex integrals
C201.5	Discuss the complex transformations and their applications to rotate, translate and magnify the images.
C202 Analog Circuits	
C202.1	Develop the capability to analyze the analog circuit to determine its output
C202.2	Apply the concepts of mathematics in designing analog circuits
C202.3	Analyze the applications of op. amp and use circuit simulation for practice
C202.4	Demonstrate the use of op. amp. in simple circuits
C202.5	Design oscillators and filters using op amp.
C203 Electronics Devices and Circuits	
C203.1	Compare & verify parameters of semiconductor devices.
C203.2	Compare different JFET & MOSFET Configuration depending on Voltage Gain, Input Resistance, and Output Resistance for the design of any application.
C203.3	Analyze Biasing techniques to get stable Q- Point and its application.
C203.4	Analyze the impact on AC parameters of an amplifier After providing the

	positive & negative feedback.
C203.5	Design an Amplifier circuit for desired response.
C203.6	Design voltage regulators
C204 Network Analysis	
C204.1	Apply knowledge of mathematics to solve numerical based on network simplification and it will be used to analyze the same
C204.2	Design of active filters and adaptive filters.
C204.3	Identify issues related to transmission of signals & apply it to analyze different RLC networks
C204.4	Analyze of electrical circuits using Laplace Transform
C204.5	Evaluate the variation of circuit parameters such as impedance, phase angle, voltage and current with frequency
C205 Digital Logic Design	
C205.1	Understand use of basic logic gates
C205.2	Analyze the combinational and sequential circuits
C205.3	Apply hardware circuit for any digital application and test performance
C205.4	Identify the architecture and use of VHDL for various operations
C205.5	Test combinational circuits using simulation software
C206 Basic Human Rights	
C206.1	Discuss the importance of philosophical and cultural basis and historical perspectives of human rights
C206.2	Explain Universal Declaration of Human Rights
C206.3	Identify principles of human values towards ethics, professional ideals and virtues
C206.4	Summarize directive principles of state policies and the fundamental rights guaranteed by the constitution of India and Apply an ethical understanding and perspective to business situations.
C206.5	Discuss responsibilities towards nation in context with constitution of India.
C207 Analog Communication Lab	
C207.1	Apply the theoretical concepts of analog circuit in practice for demonstrating its applications
C207.2	Use virtual lab facility for performing some practical's using simulation
C207.3	Design and create simple circuits using op. amp
C207.4	Analyze the circuits for getting desired output

C208 Electronics Devices and Circuits Lab	
C208.1	Analyze the current voltage characteristics of semiconductor devices.
C208.2	Analyze dc circuits and relate ac models of semiconductor devices with their physical Operation.
C208.3	Apply the Concept of Negative & Positive Feedback on Amplifier circuits & identify the effect of F/B on amplifier characteristics.
C208.4	Design real time applications of IC 555, FET, MOSFET.
C208.5	Evaluate frequency response to understand behavior of semiconductor devices.
C208.6	Design of Regulated DC Power Supply.
C209 NA Lab	
C209.1	Understand basic laws of network systems and apply them for solving electrical circuits.
C209.2	Analyze electrical circuits using various network theorems and apply them to evaluate electrical quantities
C209.3	Apply the properties of admittance functions to synthesize the network.
C209.4	Analyze the two port networks to evaluate the parameters of electrical & electronic systems for the designing of various circuits and devices
C210 DLD Lab	
C210.1	Identify different IC's and logic gates
C210.2	Design and implement digital circuits such as adders, subtractors and comparators
C210.3	Design counters and shift registers
C210.4	Design higher level digital systems.
C211 Electronics Workshop	
C211.1	Identify different analog and Digital ICs (Integrated Circuits) for different applications.
C211.2	Create real world application using analog and digital techniques.
C211.3	Evaluate the performance of normal semiconductor devices and power semi conductor devices.
C211.4	Design and Apply voltage regulator circuits for various applications.
C212 Field Training	
C212.1	Asses and appraise engineering practices.
C212.2	Follow and practice industrial norms.

C212.3	Learn to work effectively as a team member, developing communication, leadership and collaborative problem solving skills
C213.4	Manage time, resources effectively to meet project deadlines and goals
SY Even Semester	
C213 EMI	
C213.1	Understand the working, construction and characteristics of DC machines
C213.2	Identify the use of various sensors and transducers
C213.3	Explain various industrial measurements and applications
C213.4	Distinguish between working principle of various motors
C213.5	Summarize the working principal of special purpose machines
C214 ACE	
C214.1	Understand the fundamental concepts and components of analog communication systems.
C214.2	Understand the concepts of modulation and demodulation techniques.
C214.3	Design circuits to generate modulated and demodulated wave.
C214.4	Summarize modulation, demodulation, transmitters, receivers, noise performance, angle modulation.
C214.5	Explain signal to noise ratio, noise figure and noise temperature for single and cascaded stages in a communication system.
C215 Microprocessor	
C215.1	Understand general architecture of a microcomputer system, organization of 8085 & 8086 Microprocessor
C215.2	Identify and formulate control, security and monitoring system using microcontroller.
C215.3	Design cost effective real time system to serve engineering solution for society.
C215.4	Analyze the performance of Embedded System using modern tools.
C215.5	Design applications using microcontroller.
C216 S&S	
C216.1	Understand mathematical description and representation of continuous and discrete-time signals and systems.
C216.2	Create input output relationship for linear shift invariant system and understand the convolution operator for continuous and discrete time system.

C216.3	Understand and resolve the signals in frequency domain using Fourier series and Fourier transforms.
C216.4	Understand the limitations of Fourier transform and the need for Laplace transform and develop the ability to analyze the system in the s- domain.
C216.5	Understand the basic concept of Z transform and its ROC and the Importance of Inverse Z transform
C217 PDE	
C217.1	Use an engineering designs and product development processes.
C217.2	Create 3D solid models of Electronics/mechanical components using Design studio/AutoCAD software
C217.3	Demonstrate individual skill using selected manufacturing techniques, including drilling, pressing, tapping, and rapid prototyping
C217.4	Employ engineering, scientific, and mathematical principles to execute a design from concept to finished product and fabricate an electro-mechanical assembly from engineering drawings.
C218 NMCP	
C218.1	Comprehending the Basics and Practical Uses of Numerical Methods.
C218.2	Apply numerical methods to Solve Math Problems involving linear system of Equations and Differential Equations.
C218.3	Demonstrate Curve Fitting and Numerical Integration Concepts and Their Application
C218.4	Assess and Select the Right Computational Methods for Specific Problem Types
C218.5	Understand Object-Oriented Programming Concepts and Write C++ Programs with Essential Elements
C218.6	Write a program using advanced C++ features such as Type Conversion, Polymorphism, and Copy Constructors
C219 EMI Lab	
C219.1	Measure the various physical parameters like displacement. Force, temperature etc using sensors
C219.2	Differentiate between working principle of different types of motors
C219.3	Understand the working of different types of Sensors and transducers used in different appliances and machines
C219.4	Develop simple projects using sensors, transducers and electrical machines.
C220 ACE Lab	

C220.1	Understand and identify the fundamental concepts and various components of analog communication systems.
C220.2	Understand the concepts of modulation and demodulation techniques.
C220.3	Design circuits to generate modulated and demodulated wave.
C220.4	Distinguish between modulation, demodulation, transmitters and
C221 Micro Lab	
C221.1	Identify and formulate control, security and monitoring system using microcontroller.
C221.2	Design cost effective real time system to serve engineering solution for society.
C221.3	Analyze the performance of Embedded System using modern tools.
C221.4	Design Multidisciplinary applications using microcontroller..
C222 S&S Lab	
C222.1	Construct and model continuous time and discrete time signals and apply them for the verification of systems.
C222.2	Calculate Fourier series and Fourier transform of continuous and discrete time signals using simulation software.
C222.3	Analyze signal and system properties like stability and causality using Laplace and Z transforms using simulation software.
C222.4	Monitor the effects of sampling frequency on a continuous time signal practically.
C223 Skill Development	
C223.1	Develop Effective communication through verbal/oral communication and improving the listening skills.
C223.2	Evaluate precise briefs or reports and technical documents.
C223.3	Participate in group discussion/meetings/interviews and prepare & deliver presentations.
C223.4	Develop creative thinking.
C223.5	Develop the spirit of teamwork, Inter-personal relationships, conflict management, and leadership quality.