



## **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

<b>B. Tech. ECT Final Odd Semester (2021-22)</b>	
<b>C401 DC</b>	
C401.1	Analyze the performance of a base-band and pass-band digital communication system in terms of error rate and spectral efficiency
C401.2	Evaluate the time and frequency domain analysis of the signals in a digital communication system
C401.3	Understand and Investigate representation, characteristics of random signals and processes.
C401.4	Analyze digital modulation schemes and understand the reception of digital signal.
C401.5	Classify the Performance of Spread Spectrum Communication System
<b>C402D FOC</b>	
C402D.1	Understand the propagation of light through optical fiber, block diagram of OFC and signal degradation in optical fibers
C402D.2	Summarize the classification of optical fibers and their fabrication techniques
C402D.3	Understand the working of optical sources and their fabrication process
C402D.4	Examine the necessity of optical amplifier and optical signal multiplexing
C702.5	Identify non-linear effects in fiber optic link
<b>C403C VLSID</b>	
C403C.1	Design digital circuits with HDL, simulate, synthesis and prototype in PLDs.
C403C.2	Understand chip level issues & how designer can minimize these issues.

C403C.3	Analyze the digital circuits by designing its prototype in PLDs.
C404C.4	Design & analyze the digital Circuits using CMOS technology for specified applications.
C403C.5	Design & Analyze analog Circuits using CMOS technology for specified applications
C403C.6	Evaluate the performance of digital circuits & test the digital circuits for the required purpose using different techniques.
<b>C404A CE</b>	
C404A.1	Understand electronics engineering concepts used in consumer electronics systems.
C404A.2	Identify the need for preventive maintenance in various electronic appliances.
C404A.3	Evaluate the performance of different electronic products and systems based on specifications.
C404A.4	Distinguish the working of various color TV transmission blocks, washing machine, fax machine, and all electronic gadgets
<b>C405 FM</b>	
C405.1	Understand the meaning of management
C405.2	Apply economic analysis for developing management policy
C405.3	Analyze the planning process to make decisions
C405.4	Create knowledge of the value of money over time and its uses
C405.5	Apply the concept of organizing for the effective functioning of a management
<b>C406D FOCL</b>	
C406D.1	Understand propagation of light through optical fiber, set up fiber optic analog and digital link
C406D.2	Investigate reasons for loss of signal in optical fiber and measure the propagation loss in optical fiber experimentally.
C406D.3	Measure numerical aperture of optical fiber in physical and virtual lab
C406D.4	Investigate various multiplexing techniques and perform wavelength division multiplexing and demultiplexing of data using optical fiber
<b>C407A ESDL</b>	
C407A.2	Apply the Knowledge and demonstrate assembly level and embedded C programming for microcontroller.
C407A.1	Understand design interfacing of various peripherals with

	microcontrollers.
C407A.4	Create real time system using microcontrollers.
C407A.3	Analyze the real time output of various Embedded System applications.
<b>C407C VLSIL</b>	
C407C.1	Design various combinational and sequential circuits using VHDL on FPGA.
C407C.2	Design the schematic and layout of various digital CMOS logic circuits using EDA tools.
C407C.3	Demonstrate the ability to use various EDA tools for digital system design & analog system design.
C407C.4	Understand the physical design process of Digital Integrated Circuits
<b>C408A CEL</b>	
C408A.1	Compute the technical specification of electronics Audio system (microphone and speaker).
C408A.2	Analyze the Trouble shoots of consumer electronics products like TV, washing machine and AC.
C408A.3	Analyze various controls of color TV receiver and troubleshoot it.
C408A.4	Understand the use of various functions of Cam coder and shoot a video, take snapshots and save them in appropriate format
<b>C409 Project Lab</b>	
C409.1	Identify real-world problem
C409.2	Create a team of multidisciplinary field partners, discuss the problem with respect to ethical values and societal aspects to formulate the problem
C409.3	Formulate and develop a design proposal for the said problem
C409.4	Compare and Critique for the cost effective development of project
C409.5	Design multidisciplinary projects using modern tools and technology
C409.6	Apply skills to prepare effective project reports

<b>C410 FT</b>	
C410.1	Develop and introspect a planned approach towards career & life in general.
C410.2	Explain the use of functional and chronological resume.
C410.3	Develop confidence in group discussions.
C410.4	Face the personal interview confidently
<b>B. Tech. ECT Final Even Semester</b>	
<b>C411A IOT</b>	
C411A.1	Interpret the impact and challenges posed by IoT networks leading to new architectural models.
C411A.2	Illustrate the smart objects and the technologies to connect them to network.
C411A.3	Compare different Application protocols for IoT
C411A.4	Identify sensor technologies for sensing real world entities and understand the role of IoT in various domains of Industry
C411A.5	Evaluate power of Cloud Computing in a networked economy and Know applications of each technology
C411A.6	Apply of Data Analytics in IoT.
<b>C411B CVIP</b>	
C411B.1	Understand the Image formation fundamentals and goals of computer vision and image processing.
C411B.2	Compare various feature extraction techniques
C411B.3	Analyse various pattern recognition techniques
C411B.4	Identify various machine learning algorithms for medical image segmentation
C411B.5	Apply CVIP concepts to find solution to real life problems
<b>C411C DICD</b>	
C411C.1	Understand the circuit level, chip level Issues & its optimization.
C411C.2	Compute the performance of Basic Digital Circuit i.e. inverter.
C411C.3	Design& analyze of combinational, sequential circuit using different design techniques.
C411C.4	Analyze digital circuit layout & test the circuit for the desired requirement.
C411C.5	Design the digital circuit & compute the response by using modern tools.
C411C.6	Design the data path for the processor using best digital circuit

	design technique.
<b>C412 Project Lab</b>	
C412.1	Identify real-world problem
C412.2	Create a team of multidisciplinary field partners, discuss the problem with respect to ethical values and societal aspects to formulate the problem
C412.3	Formulate and develop a design proposal for the said problem.
C412.4	Compare and Critique for the cost effective development of project
C412.5	Design multidisciplinary projects using modern tools and technology
C412.6	Apply skills to prepare effective project reports