M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
UG - CSE, EEE & MECH Programs Accredited by NBA, New Delhi
Accredited with 'A+' grade by NAAC
An ISO 9001:2015 Certified Institution
Recognized by UGC under section 2(f) & 12(B) of UGC Act, 1956
Trichy – Pudukkottai Road, Tiruchirappalli – 620 007. Phone:0431-2660 303
Website:www.miet.edu, E-mail:principalengg@miet.edu, contact@miet.edu

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Regulation-2021 UG

COURSE OUTCOME ,
CO-PO/PSO MAPPING,
COURSE-PO/PSO MAPPING

REGULATION – 2021 ELECTRONICS AND COMMUNICATION ENGINEERING		
SEMESTER I		
Sl. No.	**COURSE OUTCOME**	**BT LEVEL**
C101/ HS3152/ Professional English-I		
C101.1	Engage learners in meaningful language and activities to improve their LSRW skills	K1
C101.2	Enhance learner's awareness of general rules of writing for specific audience.	K2
C101.3	Help learners understand the purpose audience contexts of different types of writing	K2
C101.4	Develop analytical thinking skills for problem solving in communication contexts	K2
C101.5	Demonstrate an understanding of job application and interview for internship and placement	K2
C101.6	Enable learners of Engineering and Technology to develop their basic communication skill in English	K2
C102/ MA3151/Matrices And Calculus		
C102.1	Use the matrix algebra methods for solving practical problems.	K3
C102.2	Apply differential calculus tools in solving various application problems.	K2
C102.3	Able to use differential calculus ideas on several variable functions.	K2
C102.4	Understand different methods of integration in solving practical problems.	K2
C102.5	Apply multiple integral concepts in solving areas, volumes and other practical problems.	K2
C102.6	Apply matrix and calculus in solving engineering problems.	K2
C103/ PH3151/Engineering Physics		
C103.1	Understand the static and dynamic behavior of the objects.	K1
C103.2	Understand the wave motion and the properties of electromagnetic waves	K1
C103.3	Gain knowledge on laser and its working principle in fiber optic communication.	K2
C103.4	Get adequate information on electron particles in metals.	K2

C103.5	Gain knowledge on the application of quantum theory.	K2
C103.6	Gain knowledge about waves and particles in nature under various conditions.	K2
C104/ CY3151/Engineering Chemistry		
C104.1	Understand the process of various water treatment and its remedial measure	K2
C104.2	Know about the various methods of preparation of nano materials	K1
C104.3	Gain the knowledge of phase rule and composites for material selection	K2
C104.4	Recommend suitable fuels for industries	K1
C104.5	Recognize various form of energy resources and its applications	K2
C104.6	Gain the various applications of nanomaterials in various field	K2
C105 / GE3151/ Problem Solving And Python Programming		
C105.1	Demonstrate algorithm, flowchart for various programs	K1
C105.2	Do simple programs using python programming basics	K2
C105.3	Illustrate programs by using arrays and string functions	K2
C105.4	Develop simple programs using functions and pointers	K2
C105.5	Design mini projects with structures.	K3
C105.6	Develop applications using python Programming Language	K3
C106 / GE8161/ Problem Solving And Python Programming laboratory		
C106.1	Understand the problem to develop the algorithm and the solutions for a simple computational problems	K3
C106.2	Know the basic programming construction in Python	K2
C106.3	Apply the programs in Python using conditionals and loops for solving problems	K2
C106.4	Use the data structures to decompose the python program.	K2
C106.5	Initialize the Python packages for developing software applications	K3
C106.6	Solve the various computing techniques for Python-based solutions to real world problems	K2

C107 / BS3171/ Physics And Chemistry Laboratory		
C107.1	Analyze the physical principle involved in the functioning of various measuring instruments	K2
C107.2	Access, process and analyze the data using mathematical models in describing physical reality	K3
C107.3	Determine the physical parameters in mechanics and optics that will nurture the students in all branches of Engineering	K2
C107.4	Determine the DO content in water sample by Winkler's method	K3
C107.5	Determine the amount of ions through volumetric techniques.	K3
C107.6	Determine the strength of acid using pH meter.	K2
SEMESTER – II		
C108 / HS3252/ Professional English-II		
C108.1	Engage learners in meaningful language and activities to improve their LSRW skills	K1
C108.2	Enhance learners awareness of general rules of writing for specific audience.	K1
C108.3	Help learners understand the purpose audience contexts of different types of writing	K2
C108.4	Develop analytical thinking skills for problem solving in communication contexts	K2
C108.5	Demonstrate an understanding of job application and interview for internship and placement	K1
C108.6	Enable learners of Engineering and Technology to develop their basic communication skill in English	K2
C109 / MA3251/ Statistics And Numerical Methods		
C109.1	Apply the concept of testing of hypothesis for small and large samples in real life problems.	K3
C109.2	Apply the basic concepts of classifications of design of experiments in the field of agriculture.	K3
C109.3	Appreciate the numerical techniques of interpolation in various intervals and apply the numerical techniques of differentiation and integration for engineering problems.	K2
C109.4	Understand the knowledge of various techniques and methods for solving first and second order ordinary differential equations.	K2

C109.5	Solve the partial and ordinary differential equations with initial and bound condition by using certain techniques with engineering applications.	K2
C109.6	Apply the knowledge of classification of design experiments and various types differential equations.	K2
C110 / PH3254/Physics For Electronics Engineering		
C110.1	Know the basics of crystallography and its importance for materials properties	K2
C110.2	Gain knowledge on the electrical and magnetic properties of materials and their applications	K2
C110.3	Know about the semiconducting materials and their applications in semiconductor devices	K2
C110.4	Understand the optical properties of materials and working principles of various optical display devices.	K2
C110.5	Significance of nano structured materials and their uses in nanoelectronic devices.	K2
C110.6	Gain the knowledge of electrical, optical properties of materials and their applications in nano electronic devices	K2
C111/ BE3254/ Electrical And Instrumentation Engineering		
C111.1	Gain knowledge about transformers in electrical circuits	K1
C111.2	Understand the working principle of motors and generators	K2
C111.3	Gain knowledge on characteristics of electrical machines for various applications	K2
C111.4	Know about the various types of meters and instruments used in electrical machines	K2
C111.5	Gain knowledge on basics of power system structure and protection schemes.	K2
C111.6	Understand the working principle of power system and its controlling methods	K2
C112 /GE3251/Engineering Graphics		
C112.1	Use BIS conventions and specifications for engineering drawing.	K2
C112.2	Construct the conic curves, involutes and cycloid.	K2

C112.3	Solve practical problems involving projection of lines.	K3
C112.4	Sketch all the views of engineering objects in free hand.	K2
C112.5	Draw the development of simple solids.	K3
C112.6	Draw the orthographic, isometric and perspective projections of simple solids	K3
C113/EC3251/Circuit Analysis		
C113.1	Gain knowledge in understanding of ohms law, Kirchhoff's current and voltage law for the analysis of electrical circuits	K3
C113.2	Understand the network theorem and network analysis for AC and DC circuits to solve real time problems	K3
C113.3	Gain knowledge of characteristics sinusoids to analyze steady state response of R, L, C functions.	K2
C113.4	Understand the transient and steady state response of the circuits and frequency response of parallel and series resonance	K2
C113.5	Know about the concept of coupling in circuits and network topologies	K2
C113.6	Understand the concept of electrical theorems and the functioning of electrical systems for engineering applications.	K3
C114/GE3271/Engineering Practices Laboratory		
C114.1	Gets exposure regarding Joining operations in engineering materials.	K1
C114.2	Carry out the basic machining operations in engineering materials.	K2
C114.3	Carry out basic home electrical works and appliances	K2
C114.4	Measure the electrical quantities	K2
C114.5	Understand basic electronic components.	K2
C114.6	Integrate the components and gates using soldering practices.	K3
C115 / EC3271/Circuit Analysis Laboratory		
C115.1	Apply Kirchhoff's laws to solve simple and complex circuits.	K2
C115.2	Apply network theorems to solve simple and complex circuits.	K2

C115.3	Demonstrate the working of Analog & Digital oscilloscopes.	K2
C115.4	Determine the frequency response of RC & RLC transient circuits.	K2
C115.5	Use MATLAB to simulate series, parallel resonant RLC circuits.	K3
C115.6	To simulate three phase balanced and unbalanced star, delta network circuit using MATLAB.	K3
SEMESTER III		
C201/MA3355/ Random Processes and Linear Algebra		
C201.1	Explain the fundamental concepts of advanced algebra and their role in modern mathematics and applied contexts.	K3
C201.2	Demonstrate accurate and efficient use of advanced algebraic techniques.	K3
C201.3	Apply the concept of random processes in engineering disciplines.	K2
C201.4	Understand the fundamental concepts of probability with a thorough knowledge of standard distributions that can describe certain real-life phenomenon	K3
C201.5	Understand the basic concepts of one dimensional random variables and apply them to model engineering problems.	K2
C201.6	Understand the basic concepts of two dimensional random variables and apply them to model engineering problems.	K2
C202/ CS3353/C Programming and Data Structures		
C202.1	Develop C programs for any real world/technical application.	K3
C202.2	Apply advanced features of C in solving problems.	K3
C202.3	Write functions to implement linear and non–linear data structure operations.	K3
C202.4	Suggest and use appropriate linear/non–linear data structure operations for solving a given problem.	K2
C202.5	Appropriately use sort and search algorithms for a given application.	K3
C202.6	Apply appropriate hash functions that result in a collision free scenario for data storage and retrieval	K3
C203/EC3354/ Signals and Systems		
C203.1	To determine if a given system is linear/causal/stable	K2
C203.2	To determine the frequency components present in a deterministic signal	K2
C203.3	The characterize continuous LTI systems in the time domain and frequency	K3

C203.4	To characterize discrete LTI systems in the time domain and frequency	K3
C203.5	To compute the output of an LTI system in the time and frequency domains.	K2
C203.6	Describe the mathematical modelling of DT systems.	K2
C204/ EC3353/ Electronic Devices and Circuits		
C204.1	Explain the structure and working operation of basic electronic devices	K2
C204.2	Design and analyze amplifiers.	K2
C204.3	Analyze frequency response of BJT and MOSFET amplifiers	K3
C204.4	Design and analyze feedback amplifiers and oscillator principles	K3
C204.5	Design and analyze power amplifiers and supply circuits.	K3
C204.6	To design the Power amplifier using MOSFET	K2
C205 /EC3351/ Control Systems		
C205.1	Compute the transfer function of different physical systems	K1
C205.2	Analyze the time domain specification and calculate the steady state error.	K2
C205.3	Illustrate the frequency response characteristics of open loop and closed loop system response.	K3
C205.4	Analyze the stability using Routh and root locus techniques	K3
C205.5	Illustrate the state space model of a physical system and discuss the concepts of sampled data control system.	K2
C205.6	To design the digital control design using state feedback.	K3
C206 / EC3352/ Digital Systems Design		
C206.1	Use Boolean algebra and simplification procedures relevant to digital logic	K2
C206.2	Design various combinational digital circuits using logic gates	K3
C206.3	Analyze and design synchronous sequential circuits	K3
C206.4	Analyze and design asynchronous sequential circuits.	K3
C206.5	Build logic gates and use programmable devices.	K3
C206.6	To Implement the combinational logic/sequential logic design using standard ICs	K3
C207 /EC3361/ Electronic devices and circuits Laboratory		
C207.1	Testing the Characteristics of PN Junction Diode and Zener diode	K3
C207.2	Testing the Characteristics of BJT device	K3
C207.3	Testing the Characteristics of MOSFET device	K3
C207.4	Design and Testing of BJT amplifiers	K3

C207.5	Design and Testing of MOSFET amplifiers	K3
C207.6	Testing the Operation of power amplifiers.	K3
C208 /CS3362/ C Programming and Data Structures Laboratory		
C208.1	Use different constructs of C and develop applications	K2
C208.2	Write functions to implement linear and non-linear data structure operations	K2
C208.3	Suggest and use the appropriate linear / non-linear data structure operations for a given problem	K3
C208.4	Apply appropriate hash functions that result in a collision free scenario for data storage and Retrieval	K3
C208.5	Implement Sorting and searching algorithms for a given application	K3
C208.6	Develop applications in C and Solve problems using various linear data structures algorithms.	K3
SEMESTER IV		
C209/EC3452/ Electromagnetic Fields		
C209.1	Relate the fundamentals of vector, coordinate system to electromagnetic concepts	K3
C209.2	Analyze the characteristics of Electrostatic field	K2
C209.3	Interpret the concepts of Electric field in material space and solve the boundary conditions	K3
C209.4	Explain the concepts and characteristics of Magneto Static field in material space and solve boundary conditions	K2
C209.5	Determine the significance of time varying fields	K3
C209.6	Discuss the principles of propagation of uniform plane waves	K2
C210 /EC3401/Networks and Security		
C210.1	Demonstrate the Network Models, Layers and Functions.	K1
C210.2	Categorize and classify the Routing Protocols.	K2
C210.3	List the functions of the Transport and Application Layer.	K1
C210.4	Enumerate the network Security Mechanisms.	K2
C210.5	Discuss the Hardware Security Attacks and Countermeasures	K3
C210.6	Measure the performance and troubleshoot cyber security systems	K2
C211/EC3451/Linear Integrated Circuits		
C211.1	Design linear and nonlinear applications of OP – AMPS	K2
C211.2	Design applications using analog multiplier and PLL	K3

C211.3	Design ADC and DAC using OP – AMPS	K3
C211.4	Generate waveforms using OP – AMP Circuits	K3
C211.5	Analyze special function ICs	K2
C211.6	Generate waveforms using operational amplifiers Circuits	K3
C212/EC3492/Digital Signal Processing		
C212.1	Apply DFT for the analysis of digital signals and systems	K3
C212.2	Design IIR and FIR Filters	K3
C212.3	Characterize the effects of finite precision representation on digital filters	K2
C212.4	Design multirate filters	K3
C212.5	Apply adaptive filters appropriately in communication systems	K3
C212.6	Know the importance of various techniques used in signal processing such as preprocessing, equalization and filtering.	K2
C213/ EC3491/Communication Systems		
C213.1	Gain knowledge in amplitude modulation techniques.	K1
C213.2	Understand the concepts of Random Process to the design of communication systems.	K2
C213.3	Gain knowledge in digital techniques.	K1
C213.4	Gain knowledge in sampling	K1
C213.5	Gain knowledge in quantization.	K1
C213.6	Understand the importance of demodulation techniques	K2
C214/GE3451/ENVIRONMENTAL SCIENCES AND SUSTAINABILITY		
C214.1	To recognize and understand the functions of environment, ecosystems and biodiversity and their conservation.	K2
C214.2	To identify the causes, effects of environmental pollution and natural disasters and contribute to the preventive measures in the society.	K2
C214.3	To identify and apply the understanding of renewable and non-renewable resources and contribute to the sustainable measures to preserve them for future generations.	K2
C214.4	To recognize the different goals of sustainable development and apply them for suitable technological advancement and societal development.	K3
C214.5	To demonstrate the knowledge of sustainability practices and identify green materials, energy cycles and the role of sustainable urbanization.	K2
C214.6	Perform case study on carbon prints	K3

C215 / EC3461/ Communication Systems Laboratory		
C215.1	Design AM &FM Modulators for specific applications	K2
C215.2	Design Digital Modulators for specific applications	K2
C215.3	Compute the sampling frequency for digital modulation	K4
C215.4	Simulate & validate the various functional modules of communication system	K2
C215.5	Demonstrate knowledge in base band signaling schemes through implementation of digital modulation schemes.	K2
C215.6	Apply various channel coding schemes and demonstrate their capabilities towards the improvement of the noise performance of communication system	K3
C216 /EC3462/Linear Integrated Circuits Laboratory		
C216.1	Analyze various types of feedback amplifiers	K2
C216.2	Design oscillators, tuned amplifiers, wave-shaping circuits and multivibrators	K3
C216.3	Model real-time applications using embedded-system concepts	K3
C216.4	Design and simulate feedback amplifiers, oscillators, tuned amplifiers, wave shaping circuits and multivibrators, filters using SPICE Tool.	K2
C216.5	Design amplifiers, oscillators, D-A converters using operational amplifiers.	K2
C216.6	Design filters using op-amp and perform an experiment on frequency response	K2
SEMESTER V		
C301 /EC3501/Wireless Communication		
C301.1	Understand the fundamental cellular concept and design of Cellular system	K2
C301.2	Understand Mobile Radio Propagation Mechanism	K2
C301.3	Understand the Concept of Fading	K2
C301.4	Understand the concept of Multiple Access Techniques	K2
C301.5	Describe a wireless channel and evolve system design specifications	K2
C301.6	Understand wireless Networks and design a cellular system based on resource available resources and traffic demands.	K2
C302/ EC3552/VLSI and Chip Design		
C302.1	Acquire in-depth knowledge of MOS and CMOS technologies	K2
C302.2	Perform analysis and design of combinational circuits	K3

C302.3	Perform analysis and design of sequential circuits and their clocking strategies	K3
C302.4	Acquire in-depth knowledge about interconnects, memory architecture	K2
C302.5	Acquire knowledge about ASIC design	K2
C302.6	Design of FPGAs	K3
C303/EC3551/Transmission Lines and RF Systems		
C303.1	Describe the losses and characteristics of transmission lines	K1
C303.2	Calculate the standing wave ratio and input impedance in high frequency transmission lines	K2
C303.3	Illustrate impedance matching by stubs using smith charts	K3
C303.4	Generalize the properties of TE and TM waves	K2
C303.5	Design a RF transceiver system for wireless communication	K3
C303.6	Compute high frequency line, power and impedance measurements	K2
C304/CEC345/Optical Communication and Network		
C304.1	Realize Basic Elements In Optical Fibers, Different Modes And Configurations.	K2
C304.2	Analyze The Transmission Characteristics Associated With Dispersion and Polarization Techniques.	K3
C304.3	Design Optical Sources And Detectors With Their Use In Optical Communication System.	K3
C304.4	Construct Fiber Optic Receiver Systems, Measurements And Techniques.	K3
C304.5	Design Optical Communication Systems And Its Networks.	K2
C304.6	Understand the Communication concepts and Network Techniques	K2
C305 / CEC366/Image Processing		
C305.1	Understand the basic concept of Digital Image.	K2
C305.2	Operate on images using the techniques of smoothing, sharpening and enhancement.	K3
C305.3	Understand the restoration concepts and filtering techniques.	K2
C305.4	Learn the basics of segmentation, features extraction, compression and recognition methods for color models.	K2
C305.5	Use various coding techniques for image compression.	K3
C305.6	Analyze various image descriptors and features of image representation techniques.	K3

C306 /CEC352/Satellite Communication		
C306.1	Understand the basics of satellite orbits	K2
C306.2	Understand the satellite segment and earth segment	K2
C306.3	Analyze the various methods of satellite access	K3
C306.4	Understand the applications of satellites	K2
C306.5	Understand the basics of satellite Networks	K2
C306.6	Analyze the various applications	K3
C307/ MX3084/Disaster Risk reduction and management		
C307.1	Understand the concept of Hazards, Vulnerability and Disaster Risks.	K2
C307.2	To enhance understanding on Hazards, Vulnerability and Disaster Risk Assessment prevention and risk reduction.	K3
C307.3	Develop disaster response skills by adopting relevant tools and technology.	K2
C307.4	Enhance awareness of institutional processes for Disaster response in the country.	K2
C307.5	Develop rudimentary ability to respond to their surroundings with potential.	K3
C307.6	Analyze the case studies in disaster and understand the disaster management concept.	K3
C308 / EC3561/VLSI Laboratory		
C308.1	Write HDL Code for basic digital circuits	K3
C308.2	Write HDL Code for advanced digital circuits	K3
C308.3	Implement digital circuits in FPGA board	K3
C308.4	Synthesize, place, route IPs	K3
C308.5	Design, simulate and extract layout of digital circuits	K3
C308.6	Design and simulate analog circuits	K3

S.No	CO-PO/PSO MAPPING													
	C101/HS3152/Professional English-I													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C101.1	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C101.2	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C101.3	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C101.4	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C101.5	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C101.6	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C102/MA3151/ Matrices And Calculus														
C102.1	3	3	2	3	-	-	-	-	-	-	-	2	-	2
C102.2	3	3	2	3	2		-	-	-	-	-	2	-	2
C102.3	3	3	3	2	2		-	-	-	-	-	2	-	2
C102.4	3	3	2	2	2		-	-	-	-	-	2	-	-
C102.5	3	3	3	2	2		-	-	-	-	-	2	-	2
C102.6	3	3	-	-	-		-	-	-	-	-	-	-	2
C103/PH3151/ Engineering Physics														
C103.1	3	3	-	-	-	3	-	-	-	-	-	2	-	-
C103.2	3	3	-	-	-	2	-	-	-	-	-	2	-	-
C103.3	3	-	2	-	2	3	2	-	-	-	-	2	3	3
C103.4	3	3	-	2	-	-	-	-	-	-	-	2	-	-
C103.5	3	3	-	2	-	-	-	-	-	-	-	2	-	-
C103.6	3	3	2		-	-	-	-	-	-	-	2	-	-

C104/CY8151-/Engineering Chemistry														
C104.1	3	3	2	2	2	2	2	-	-	-	-	2	-	2
C104.2	3	3	2	2	2	-	2	-	2	-	-	2	-	2
C104.3	3	2	2	2	-	-	-	-	-	-	-	2	-	2
C104.4	3	3	2	2	2	-	-	-	-	-	-	2	-	2
C104.5	3	3	2	2	2	2	-	-	-	-	-	2	-	2
C104.6	3	3	2	2	2	2	-	-	-	-	-	2	-	2
C105/GE3151/Problem Solving And Python Programming														
C105.1	3	2	-	-	-	-	-	-	-	-	-	-	-	-
C105.2	3	2	2	-	-	-	-	-	-	-	-	-	-	-
C105.3	3	2	2	-	-	-	-	-	-	-	-	-	-	-
C105.4	3	2	2	2	2	-	-	-	-	-	-	-	-	-
C105.5	3	2	2	2	2	2	-	2	-	-	-	-	-	-
C105.6	3	2	2	2	2	2	-	2	-	-	-	-	-	-
C106/GE3171/Problem Solving And Python Programming Laboratory														
C106.1	3		-	-	-	-	-	-	-	-	-	-	-	-
C106.2	3	3	3	2	-	-	-	-	-	-	-	-	-	-
C106.3	3	3	3	2	-	-	-	-	-	-	-	-	-	-
C106.4	3	2	3	2	-	-	-	-	-	-	-	-	-	-
C106.5	3	2	3	2	-	-	-	-	-	-	-	-	-	-
C106.6	3	2	3	2	-	-	-	-	-	-	-	-	-	-
C107/BS3171/Physics And Chemistry Laboratory														
C107.1	3	2	-	-	-	-	-	-	-	-	-	2	2	-
C107.2	3	2	-	-	-	-	-	-	-	-	-	2	-	-

C107.3	3	3	-	-	-	-	-	-	-	-	-	2	-	-
C107.4	2	-	-	2	-	-	2	2	3	-	-	2	-	-
C107.5	2	-	-	3	-	-	2	2	2	-	-	2	-	-
C107.6	2	-	-	2	-	-	2	2	2	-	-	2	-	-
C108/HS3252/Professional English-II														
C108.1	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C108.2	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C108.3	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C108.4	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C108.5	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C108.6	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C109/MA3251/Statistics And Numerical Methods														
C109.1	3	3	2	-	2	2	-	-	-	-	-	2	-	2
C109.2	3	3	2	-	2	2	-	-	-	-	-	2	-	2
C109.3	3	3	2	2	2	2	-	-	-	-	-	2	-	2
C109.4	3	-	2	-	2	-	-	-	-	-	-	2	-	-
C109.5	3	2	2	2	2	2	-	-	-	-	-		-	-
C109.6	3	3	-	-	-	-	-	-	-	-	-	3	-	2
C110/PH3254/Physics For Electronics Engineering														
C110.1	3	2	-	-	2	-	2	-	-	-	-	2	2	-
C110.2	3	3	-	-	2	-	2	-	-	-	-	2	2	-
C110.3	3	2	-	2	2	-	2	-	-	-	-	2	2	-
C110.4	3	2	-	-	2	-	-	-	-	-	-	2	2	-
C110.5	3	2	-	2	2	-	2	-	-	-	-	2	2	-
C110.6	3	2	-	2	2	-	2	-	-	-	-	2	2	-

C111/BE3254/Electrical And Instrumentation Engineering														
C111.1	3	3	2	-	2	-	-	-	-	-	2	2	-	-
C111.2	3	3	2	-	2	-	-	-	-	-	2	2	-	-
C111.3	3	3	2	2	2	2	-	-	-	-	2	2	-	-
C111.4	3	3	2	-	2	2	-	-	-	-	2	2	-	-
C111.5	2	2	2	-	2	2	2	-	2	-	2	2	2	-
C111.6	2	2	2	2	2	2	2	-	2	-	2	2	2	-
C112/GE3251/Engineering Graphics														
C112.1	3	3	3	2	2	-	-	-	-	2	2	2	3	3
C112.2	3	3	3	2	2	-	-	-	-	2	2	2	3	3
C112.3	3	3	3	2	2	-	-	-	-	2	2	2	3	3
C112.4	3	3	3	2	2	-	-	-	-	2	2	2	3	3
C112.5	3	3	3	2	2	-	-	-	-	2	2	2	3	3
C112.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C113/EC325/Circuit Analysis														
C113.1	3	2	2	-	2	-	-	-	-	-	-	2	-	2
C113.2	3	2	2	-	2	-	-	-	-	-	-	2	-	2
C113.3	3	2	2	-	2	-	-	-	-	-	-	2	-	2
C113.4	3	2	2	-	2	-	-	-	-	-	-	2	-	2
C113.5	3	2	2	-	2	-	-	-	-	-	-	2	-	2
C113.6	3	2	2	-	2	-	-	-	-	-	-	2	-	2
C114/GE3271/Engineering Practice Laboratory														
C114.1	3	-	-	-	-	-	-	-	-	-	-	-	2	2
C114.2	3	3	3	-	-	-	-	2	-	-	-	-	2	2

C114.3	3	3	3	-	-	-	-	2	-	-	-	-	2	2
C114.4	3	2	3	-	-	-	-	2	-	-	-	-	2	2
C114.5	3	2	3	-	-	-	-	2	-	-	-	-	2	2
C114.6	3	2	3	2	-	-	-	2	-	-	-	-	2	2
C115/EC327/ Circuit Analysis Laboratory														
C115.1	3	2	3	2	2	-	-	-	2	-	2	2	3	2
C115.2	3	2	3	2	2	-	-	-	2	-	2	2	3	2
C115.3	3	2	3	2	2	-	-	-	2	-	2	2	3	2
C115.4	3	2	3	2	2	-	-	-	2	-	2	2	3	2
C115.5	3	2	3	2	2	-	-	-	2	-	2	2	3	2
C115.6	3	2	3	2	2	-	-	-	2	-	2	2	3	2

C201/MA3355/ Random Processes and Linear Algebra														
C201.1	3	3	-	-	-	-	-	-	3	-	-	2	2	2
C201.2	3	3	-	-	-	-	-	-	3	-	-	2	2	2
C201.3	3	3	-	-	-	-	-	-	3	-	-	2	2	2
C201.4	3	3	-	-	-	-	-	-	3	-	-	2	2	2
C201.5	3	3	-	-	-	-	-	-	3	-	-	2	2	2
C201.6	3	3	-	-	-	-	-	-	3	-	-	2	2	2
C202/CS3353/C Programming and Data Structures														
C202.1	2	3	1	2	2	1	1	-	1	2	1	3	3	2
C202.2	1	2	1	2	2	-	-	-	1	1	1	2	3	2
C202.3	2	3	1	2	3	-	-	-	1	1	1	2	3	2
C202.4	2	1	-	1	1	-	-	-	2	1	1	2	3	2
C202.5	1	2	1	2	2	1	1	-	1	2	1	3	3	2
C202.6	2	2	1	2	2	1	1	-	1	1	1	2	3	2

C203/EC3354/ Signals and Systems														
C203.1	3	-	3	-	3	2	-	-	-	-	-	3	3	3
C203.2	3	-	3	-	-	2	-	-	-	-	-	3	2	3
C203.3	3	3	-	-	3	2	-	-	-	-	-	3	3	2
C203.4	3	3	-	-	3	2	-	-	-	-	-	3	2	2
C203.5	3	3	-	3	3	2	-	-	-	-	-	3	3	2
C203.6	3	3	3	3	3	2	-	-	-	-	-	3	2	2
C204/ EC3353/ Electronic Devices and Circuits														
C204.1	3	3	3	3	2	1	-	-	-	-	-	1	3	1
C204.2	3	2	2	3	2	2	-	-	-	-	-	1	3	1
C204.3	3	3	3	2	1	2	-	-	-	-	-	1	3	1
C204.4	3	3	2	3	2	2	-	-	-	-	-	1	3	1
C204.5	3	2	3	2	2	1	-	-	-	-	-	1	3	1
C204.6	3	2	3	2	2	1	-	-	-	-	-	1	3	1
C205 /EC3351/ Control Systems														
C205.1	3	3	3	2	2	2	-	-	-	-	2	3	2	2
C205.2	3	3	3	3	2	3	-	-	-	-	2	2	2	2
C205.3	3	2	3	3	2	2	-	-	-	-	2	3	2	2
C205.4	3	3	3	2	2	2	-	-	-	-	2	2	2	2
C205.5	2	2	3	3	2	3	-	-	-	-	2	3	2	2
C205.6	3	3	3	3	2	2	-	-	-	-	2	3	2	2
C206 / EC3352/ Digital Systems Design														
C206.1	3	2	2	2	-	2	-	-	-	-	3	3	3	2
C206.2	-	-	-	-	-	-	-	-	-	-	2	1	3	3
C206.3	-	3	3	2	-	2	-	-	-	-	2	2	2	2
C206.4	-	-	-	-	-	-	-	-	-	-	3	2	3	3

C206.5	-	3	3	3	-	-	-	-	-	-	2	2	2	2
C206.6	3	3	3	2	-	2	-	-	-	-	2	2	3	3
C207 /EC3361/ Electronics devices and circuits Laboratory														
C207.1	2	2	3	3	2	1	-	-	-	-	-	1	3	2
C207.2	2	2	3	3	2	1	-	-	-	-	-	1	3	2
C207.3	2		2		1	1	-	-	-	-	-	1	3	2
C207.4	-	-	-	-	3	1	-	-	-	-	-	1	3	2
C207.5	-	-	-	-	2	1	-	-	-	-	-	1	3	2
C207.6	2	2	2	3	2	1	-	-	-	-	-	1	3	2
C208 /CS3362/ C Programming and Data Structures Laboratory														
C208.1	2	3	1	2	2	1	1	-	1	2	1	2	3	2
C208.2	1	2	1	2	2	-	-	-	1	1	1	1	3	2
C208.3	2	3	1	2	3	-	-	-	1	1	1	2	3	2
C208.4	2	1	-	1	1	-	-	-	2	1	1	2	3	2
C208.5	1	2	1	2	2	1	1	-	1	2	1	1	3	2
C208.6	2	2	1	2	2	1	1	-	1	1	1	2	3	2
C209/EC3452/ Electromagnetic Fields														
C209.1	2	1	1	1	-	2	1	-	-	1	-	2	3	3
C209.2	2	2	3	3	2	2	2	-	-	1	1	2	2	3
C209.3	2	2	3	2	2	2	1	-	-	1	1	2	3	2
C209.4	2	2	3	2	2	2	1	-	-	1	1	2	2	2
C209.5	2	2	2	2	2	2	1	-	-	2	2	1	3	2
C209.6	2	2	2	2	2	2	1	-	-	1	1	2	2	2
C210 /EC3401/Networks and Security														
C210.1	3	2	2	-	-	-	-	-	2	-	-	2	2	2
C210.2	3	3	-	-	-	-	-	-	-	-	-	2	2	2

C210.3	3	2	-	-	-	-	-	-	-	-	-	-	2	2
C210.4	3	3	2	-	2	2	-	2	2	-	-	3	2	2
C210.5	3	3	2	-	2	2	-	2	2	-	-	3	2	2
C210.6	3	2	2	-	-	-	-	-	-	-	-	2	2	2
C211/EC3451/Linear Integrated Circuits														
C211.1	2	-	-	-	-	-	-	-	-	-	1	-	2	2
C211.2	2	3	3	2	-	-	-	-	-	-	-	-	2	2
C211.3	1	-	-	2	-		-	-	-	-	-	-	2	2
C211.4	1	-	-	2	-	-	-	-	-	-	-	-	2	2
C211.5	1	2	3	3	-	-	-	-	-	-	-	3	2	2
C211.6	1	2	3	2	-	-	-	-	-	-	1	3	2	2
C212/EC3492/Digital Signal Processing														
C212.1	3	3	3	3	2	2	-	-	-	-	1	1	3	2
C212.2	3	3	3	3	2	2	-	-	-	-	1	1	2	2
C212.3	3	3	2	2	2	2	-	-	-	-	1	1	2	2
C212.4	3	3	2	2	3	1	-	-	-	-	1	1	2	3
C212.5	3	2	2	2	3	2	-	-	-	-	1	1	2	1
C212.6	3	2	2	2	3	2	-	-	-	-	1	1	2	1
C213/ EC3491/Communication Systems														
C213.1	3	3	2	2	2	-	-	-	-	-	-	-	2	2
C213.2	3	3	3	3	3	-	-	-	-	-	-	-	2	2
C213.3	3	2	3	2	3	-	-	-	-	-	-	-	2	2
C213.4	3	3	2	2	2	-	-	-	-	-	-	-	2	2
C213.5	3	3	2	2	3	-	-	-	-	-	-	-	2	2
C213.6	3	3	2	2	3	-	-	-	-	-	-	-	2	2

GE3451/ENVIRONMENTAL SCIENCES AND SUSTAINABILITY														
C214.1	2	1	-	-	-	2	3	-	-	-	-	2	-	-
C214.2	3	2	-	-	-	3	3	-	-	-	-	2	-	-
C214.3	3	-	1	-	-	2	2	-	-	-	-	2	-	-
C214.4	3	2	1	1	-	2	2	-	-	-	-	2	-	-
C214.5	3	2	1	-	-	2	2	-	-	-	-	1	-	-
C214.6	3	2	1	-	-	2	2	-	-	-	-	1	-	-
C215/ EC3461/ Communication Systems Laboratory														
C215.1	2	-	-	-	-	2	2	-	2	3	-	2	2	2
C215.2	2	-	-	-	-	2	2	-	2	3	-	2	2	2
C215.3	2	-	-	-	-	2	2	-	2	3	-	2	2	2
C215.4	3	-	-	-	-	3	2	-	2	3	-	3	2	2
C215.5	3	-	-	-	-	3	2	-	2	3	-	3	2	2
C215.6	2	-	-	-	-	2	3	-	2	3	-	2	2	2
C216 /EC3462/Linear Integrated Circuits Laboratory														
C216.1	2	-	-	-	-	-	-	-	-	-	1	-	2	2
C216.2	2	3	3	2	-	-	-	-	-	-	-	-	2	2
C216.3	1	-	-	2	-		-	-	-	-	-	-	2	2
C216.4	1	-	-	2	-	-	-	-	-	-	-	-	2	2
C216.5	2	2	3	3	-	-	-	-	-	-	1	2	2	2
C216.6	2	2	3	2	-	-	-	-	-	-	1	2	2	2
C301 /EC3501/Wireless Communication														
C301.1	2	-	-	-	-	-	-	-	-	-	1	-	1	2
C301.2	2	3	3	2	-	-	-	-	-	-	-	-	1	2
C301.3	2	3	3	2	-	-	-	-	-	-	-	-	1	2

C301.4	1	-	-	2	-		-	-	-	-	-	-	1	2
C301.5	1	-	-	2	-	-	-	-	-	-	-	-	1	2
C301.6	1	2	3	3	-	-	-	-	-	-	-	3	1	2
C302/ EC3552/VLSI and Chip Design														
C302.1	3	2	1	2	-	-	-	-	-	2	2	3	3	1
C302.2	3	3	1	2	-	-	-	-	-	2	2	3	3	1
C302.3	3	3	1	2	-	-	-	-	-	2	2	3	3	1
C302.4	3	2	2	2	-	-	-	-	-	2	2	2	3	1
C302.5	3	2	2	2	-	-	-	-	-	2	2	2	3	1
C302.6	3	2	2	2	-	-	-	-	-	2	2	2	3	1
C303/EC3551/Transmission Lines and RF Systems														
C303.1	3	3	3	3	2	2	-	-	-	2	-	2	2	2
C303.2	3	2	2	3	2	2	-	-	-	2	-	2	2	2
C303.3	3	3	3	2	2	2	-	-	-	2	-	2	2	2
C303.4	3	3	2	3	2	2	-	-	-	2	-	2	2	2
C303.5	3	2	3	2	2	2	-	-	-	2	-	2	2	2
C303.6	3	2	2	2	2	2	-	-	-	2	-	2	2	2
C304/CEC345/Optical Communication and Network														
C304.1	3	3	2	3	3	1	-	-	-	-	2	2	2	2
C304.2	3	3	2	1	3	2	-	-	-	-	2	2	2	2
C304.3	3	3	3	3	2	1	-	-	-	-	2	2	2	2
C304.4	3	3	2	2	2	1	-	-	-	-	2	2	2	2
C304.5	3	3	3	3	2	1	-	-	-	-	2	2	2	2
C304.6	3	3	3	3	2	1	-	-	-	-	2	2	2	2
C305 / CEC366/Image Processing														
C305.1	3	3	3	2	2	2	-	-	-	-	-	3	3	2
C305.2	3	3	3	2	2	2	-	-	-	-	-	2	3	2

C305.3	3	3	2	2	2	2	-	-	-	-	-	2	3	2
C305.4	3	3	3	2	2	2	-	-	-	-	-	2	3	2
C305.5	3	3	3	3	2	2	-	-	-	-	-	2	2	2
C305.6	3	3	3	2	2	2	-	-	-	-	-	2	2	2
C306 /CEC352/Satellite Communication														
C306.1	2	-	2	-	-	3	-	3	-	2	-	2	2	3
C306.2	2	-	2	-	-	3	-	3	-	2	-	2	2	3
C306.3	2	-	2	-	-	3	-	3	-	2	-	2	2	3
C306.4	2	-	2	-	-	3	-	3	-	2	-	2	2	3
C306.5	2	-	2	-	-	3	-	3	-	2	-	2	2	3
C306.6	2	-	2	-	-	3	-	3	-	2	-	2	2	3
C307/ MX3084/Disaster Risk reduction and management														
C307.1	3	3	2	3	-	-	2	2	-	-	2	2	1	1
C307.2	3	3	3	3	-	-	2	1	-	-	2	2	1	1
C307.3	3	3	3	3	-	-	2	2	-	-	-	-	1	1
C307.4	3	3	2	3	-	-	2	1	-	-	2	-	1	1
C307.5	3	3	2	3	-	-	2	2	-	-	2	-	1	1
C307.6	3	3	3	3	-	-	2	2	-	-	2	-	1	1
C308 / EC3561/VLSI Laboratory														
C308.1	3	3	2	2	-	-	-	-	-	-	2	3	3	1
C308.2	3	3	2	2	-	-	-	-	-	-	2	3	3	1
C308.3	3	3	2	2	-	-	-	-	-	-	2	3	3	1
C308.4	3	3	2	2	-	-	-	-	-	-	2	2	3	1
C308.5	3	3	2	2	-	-	-	-	-	-	2	2	3	1
C308.6	3	3	2	2	-	-	-	-	-	-	2	2	3	1

S.No	Course-PO/PSO MAPPING													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C101	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C102	3	3	2.4	2.4	2	-	-	-	-	-	-	2	-	2
C103	3	3	2	2	2	2.67	2	-	-	-	-	2	3	3
C104	3	2.83	2	2	2	2	2	-	2	-	-	2	-	2
C105	3	2	2	2	2	2	-	2	-	-	-	-	-	3
C106	3	2.4	3	2	-	-	-	-	-	-	-	-	-	-
C107	2.5	2.33	-	2.33	-	-	2	2	2.33	-	-	2	2	-
C108	3	3	-	-	2	3	2	2	2	3	-	2	-	2
C109	3	2.8	2	2	2	2	-	-	-	-	-	2.2	-	2
C110	3	2.17	-	2	2	-	2	-	-	-	-	2	2	-
C111	2.67	2.67	2	2	2	2	2	-	2	-	2	2	2	-
C112	3	3	3	2	2	-	-	-	-	2	2	2	3	3
C113	3	2	2	-	2	-	-	-	-	-	-	2	-	2
C114	3	2.4	3	2	-	-	-	2	-	-	-	-	2	2
C115	3	2	3	2	2	-	-	-	2	-	2	2	3	2
C201	3	3	-	-	-	-	-	-	3	-	-	2	2	2
C202	1.67	2.17	1	1.83	2	1	1	-	1.17	1.33	1	2.33	3	2
C203	3	3	3	3	3	2	-	-	-	-	-	3	2.5	2.33
C204	3	2.5	2.67	2.5	1.83	1.5	-	-	-	-	-	1	3	1

C205	2.83	2.67	3	2.67	2	2.33	-	-	-	-	2	2.67	2	2
C206	3	2.75	2.75	2.25	-	2	-	-	-	-	2.33	2	2.67	2.5
C207	2	2	2.5	3	2	1	-	-	-	-	-	1	3	2
C208	1.67	2.17	1	1.83	2	1	1	-	1.17	1.33	1	1.67	3	2
C209	2	1.83	2.33	2	2	2	1.17	-	-	1.17	1.2	1.83	2.5	2.33
C210	3	2.5	2	-	2	2	-	2	2	-	-	2.4	2	2
C211	1.33	2.33	3	2.2	-	-	-	-	-	-	1	3	2	2
C212	3	2.67	2.33	2.33	2.5	1.83	-	-	-	-	1	1	2.17	1.83
C213	3	2.83	2.33	2.17	2.67	-	-	-	-	-	-	-	2	2
C214	2.83	1.8	1	1	-	2.17	2.33	-	-	-	-	1.667	-	-
C215	2.33	-	-	-	-	2.33	2.17	-	2	3	-	2.33	2	2
C216	1.67	2.33	3	2.2	-	-	-	-	-	-	1	2	2	2
C301	1.5	2.67	3	2.2	-	-	-	-	-	-	1	3	1	2
C302	3	2.33	1.5	2	-	-	-	-	-	2	2	2.5	3	1
C303	3	2.5	2.5	2.5	2	2	-	-	-	2	-	2	2	2
C304	3	3	2.5	2.5	2.33	1.17	-	-	-	-	2	2	2	2
C305	3	3	2.83	2.17	2	2	-	-	-	-	-	2.17	2.67	2
C306	2	-	2	-	-	3	-	3	-	2	-	2	2	3
C307	3	3	2.5	3	-	-	2	1.67	-	-	2	2	1	1
C308	3	3	2	2	-	-	-	-	-	-	2	2.5	3	1