

S.D.M Jainmatt Trust[®]**A.G.M RURAL COLLEGE OF ENGINEERING AND TECHNOLOGY, VARUR**Navagrah Teerth, NH-4 P. B. Road Opp. VRL Head Office, VARUR-581207, Hubballi, Dist. Dharwad, Karnataka
(APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELAGAUM AND RECOGNIZED BY STATE GOVT.)
Phone: 0836-2312071, Fax: 0836-2312061, E-mail: principal@agmrecet.com, Web: www.agmrecet.ac.in**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

SL.N O	SUB NAME	COs	CO Statement
I SEM			
1	Calculus and Linear Algebra	21MAT11.1	Apply the knowledge of calculus to solve problems related to polar curves and its applications in determining the bentness of a curve.
		21MAT11.2	Learn the notion of partial differentiation to calculate rate of change of multivariate functions and solve problems related to composite functions and Jacobian.
		21MAT11.3	Solve first-order linear/nonlinear ordinary differential equations analytically using standard methods.
		21MAT11.4	Demonstrate various models through higher order differential equations and solve such linear ordinary differential equations.
		21MAT11.5	Test the consistency of a system of linear equations and to solve them by direct and iterative methods.
2	Engineering Physics	21PHY12.1	Interpret the types of mechanical vibrations and their applications, the role of Shock waves in various fields.
		21PHY12.2	Demonstrate the quantisation of energy for microscopic system.
		21PHY12.3	App[y LASER and Optical fibers in opto electronic system.



S.D.M Jainmatt Trust[®]

A.G.M RURAL COLLEGE OF ENGINEERING AND TECHNOLOGY, VARUR

Navagrah Teerth, NH-4 P. B. Road Opp. VRL Head Office, VARUR-581207, Hubballi, Dist. Dharwad, Karnataka
(APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELAGAUM AND RECOGNIZED BY STATE GOVT.)

Phone: 0836-2312071, Fax: 0836-2312061, E-mail: principal@agmreet.com, Web: www.agmreet.ac.in



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

		21PHY12.4	Illustrate merits of quantum free electron theory and applications of Hall effect.
		21PHY12.5	Analyse the importance of XRD and Electron Microscopy in Nano material characterization.
3	Basic Electrical Engineering	21ELE13.1	Analyse basic DC and AC electric circuits.
		21ELE13.2	Explain the working principles of transformers and electrical machines.
		21ELE13.3	Explain the concepts of electric power transmission and distribution of power.
		21ELE13.4	Understand the wiring methods, electricity billing, and working principles of circuit protective devices and personal safety measures.
4	Elements of Civil Engineering and Mechanics	21CIV14.1	Understand the various fields of civil engineering.
		21CIV14.2	Compute the resultant of a force system and resolution of a force.
		21CIV14.3	Comprehend the action for forces, moments, and other types of loads on rigid bodies and compute the reactive forces.
		21CIV14.4	Locate the centroid and compute the moment of inertia of regular and built-up sections.
		21CIV14.5	Analyze the bodies in motion.
5	Engineering Graphics	21EVN15.1	To understand the basic principles and conventions of engineering drawing
		21EVN 15.2	To use drawing as a communication mode
		21EVN 15.3	To generate pictorial views using CAD software
		21EVN 15.4	To understand the development of surfaces



S.D.M Jainmatt Trust*

A.G.M RURAL COLLEGE OF ENGINEERING AND TECHNOLOGY, VARUR

Navagrah Teerth, NH-4 P. B. Road Opp. VRL Head Office, VARUR-581207, Hubballi, Dist. Dharwad, Karnataka
(APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELAGAUM AND RECOGNIZED BY STATE GOVT.)
Phone: 0836-2312071, Fax: 0836-2312061, E-mail: principal@agmrceet.com, Web: www.agmrceet.ac.in



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

		21EVN 15.5	To visualise engineering components
6	Engineering Physics laboratory	21PHYL16.1	Understand the measuring techniques.
		21PHYL16.2	Operate different instruments and be capable to analyse the experimental results.
		21PHYL16.3	Construct the circuits and their analysis.
		21ELE17.1	Verify KCL and KVL and maximum power transfer theorem for DC circuits.
7	Basic Electrical Engineering Laboratory	21ELE17.2	Compare power factors of different types of lamps.
		21ELE17.3	Demonstrate the measurement of the impedance of an electrical circuit and power consumed by a 3-phase load.
		21ELE17.4	Analyze two-way and three-way control of lamps.
		21ELE17.5	Explain the effects of open and short circuits in simple circuits.
		21ELE17.6	Interpret the suitability of earth resistance measured.
		8	Communicative English
21EGH18.2	Identify the nuances of phonetics, intonation and enhance pronunciation skills.		
21EGH18.3	To impart basic English grammar and essentials of language skills as per present requirement.		
21EGH18.4	Understand and use all types of English vocabulary and language proficiency.		
21EGH18.5	Adopt the Techniques of Information Transfer		



S.D.M Jainmatt Trust®

A.G.M RURAL COLLEGE OF ENGINEERING AND TECHNOLOGY, VARUR

Navagrah Teerth, NH-4 P. B. Road Opp. VRL Head Office, VARUR-581207, Hubballi, Dist. Dharwad, Karnataka
(APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELAGAUM AND RECOGNIZED BY STATE GOVT.)
Phone: 0836-2312071, Fax: 0836-2312061, E-mail: principal@agmrcet.com, Web: www.agmrcet.ac.in



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

			through presentation.
9	Innovation and Design Thinking	21ITD19.1	Appreciate various design process procedure
		21ITD19.2	Generate and develop design ideas through different technique
		21ITD19.3	Identify the significance of reverse Engineering to Understand products
		21ITD19.4	Draw technical drawing for design ideas
II SEM			
10	Advanced Calculus and Numerical Methods	21MAT21.1	Apply the concept of change of order of integration and change of variables to evaluate multiple integrals and their usage in computing the area and volume.
		21MAT21.2	• Illustrate the applications of multivariate calculus to understand the solenoidal and irrotational vectors and also exhibit the inter dependence of line, surface and volume integrals.
		21MAT21.3	Formulate physical problems to partial differential equations and to obtain solution for standard practical PDE's.
		21MAT21.4	Apply the knowledge of numerical methods in modelling of various physical and engineering phenomena.
		21MAT21.5	Solve first order ordinary differential equations arising in engineering problems.
11	Engineering Chemistry	21CHE 22.1	Impart the basic knowledge of chemistry and its principles involved in electrochemistry, energy storage devices and its commercial applications.
		21CHE 22.2	Understand the basic principles of corrosion and its prevention, metal finishing and its technological



S.D.M Jainmatt Trust®

A.G.M RURAL COLLEGE OF ENGINEERING AND TECHNOLOGY, VARUR

Navagrah Teerth, NH-4 P. B. Road Opp. VRI Head Office, VARUR-581207, Hubballi, Dist. Dharwad, Karnataka
(APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELGAUM AND RECOGNIZED BY STATE GOVT.)
Phone: 0836-2312071, Fax: 0836-2312061, E-mail: principal@agmrcet.com, Web: www.agmrcet.ac.in



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

			importance
		21CHE 22.3	Master the knowledge of synthesis, properties and utilization of engineering materials like polymers & Nano materials.
		21CHE 22.4	Apply the knowledge of Green Chemistry principles for production of chemical compounds. understanding the concepts of alternative energy sources.
		21CHE 22.5	Understand the basic concepts of water chemistry & theory, basic principle and applications of volumetric analysis and analytical instruments.
12	Problem Solving Through Programming	21PSP23/13.1	Elucidate the basic architecture and functionalities of a computer and also recognize the hardware parts.
		21PSP23/13.2	Apply programming constructs of C language to solve the real world problem
		21PSP23/13.3	Explore user-defined data structures like arrays in implementing solutions to problems like searching and sorting
		21PSP23/13.4	Explore user-defined data structures like structures, unions and pointers in implementing solutions
		21PSP23/13.5	Design and Develop Solutions to problems using modular programming constructs using functions
13	Basic Electronics and Communication Engineering	21ELN24/14.1	Describe the concepts of electronic circuits encompassing power supplies, amplifiers and oscillators
		21ELN24/14.2	Present the basics of digital logic engineering including data representation, circuits and the microcontroller system with associated sensors and



S.D.M Jainmatt Trust®

A.G.M RURAL COLLEGE OF ENGINEERING AND TECHNOLOGY, VARUR

Navagrah Teerth, NH-4 P. B. Road Opp. VRL Head Office, VARUR-581207, Hubballi, Dist. Dharwad, Karnataka
(APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELAGAUM AND RECOGNIZED BY STATE GOVT.)
Phone: 0836-2312071, Fax: 0836-2312061, E-mail: principal@agmrct.ac.in, Web: www.agmrct.ac.in



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

			actuators.
		21ELN24/14.3	Discuss the characteristics and technological advances of embedded systems.
		21ELN24/14.4	Relate to the fundamentals of communication engineering spanning from the frequency spectrum to the various circuits involved including antennas.
		21ELN24/14.5	Explain the different modes of communications from wired to wireless and the computing involved.
14	Elements of Mechanical Engineering	21EME25/15.1	Acquire a basic understanding role of Mechanical Engineering in the industry and society
		21EME25/15.2	Acquire a basic understanding of the formation of steam and its industrial application.
		21EME25/15.3	Acquire a basic understanding of renewable energy resources and basic concepts of Hydraulic turbines.
		21EME25/15.4	Acquire knowledge of various engineering materials and metal joining techniques.
		21EME25/15.5	Acquire essential experience with heat transfer devices.
		21EME25/15.6	Acquire knowledge on automobile technology in transport application and basics of Refrigeration and Air-Conditioning.
		21EME25/15.7	Acquire essential experience on basic Power transmission systems, including mechanical linkages.
		21EME25/15.8	Acquire knowledge of basic con
15	Engineering	21CHEL26/16.	Determine the pKa and coefficient of Viscosity of



S.D.M Jainmatt Trust®

A.G.M RURAL COLLEGE OF ENGINEERING AND TECHNOLOGY, VARUR

Navagrah Teerth, NH-4 P. B. Road Opp. VRL Head Office, VARUR-581207, Hubballi, Dist. Dharwad, Karnataka
(APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELAGAUM AND RECOGNIZED BY STATE GOVT.)
Phone: 0836-2312071, Fax: 0836-2312061, E-mail: principal@agmrceet.com, Web: www.agmrceet.ac.in



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

	Chemistry Laboratory	1	a given organic liquid.
		21CHEL26/16. 2	Estimate the amount of substance present in the given solution using Potentiometer Conductometric and Colorimetric.
		21CHEL26/16. 3	Determine the total hardness and chemical oxygen demand in the given solution by volumetric analysis method
		21CHEL26/16. 4	Estimate the percentage of Nickel, copper and Iron in the given analyte solution by titration method.
		21CHEL26/16. 5	CO5 Demonstrate flame photometric estimation of sodium & potassium and the synthesis of nanomaterials by Precipitation method. Handling different types of instruments for analysis of materials using small quantities of materials involved in quick and accurate results
16	Computer Programming Laborator	21CPL27/17.1	1. Define the problem statement and identify the need for computer programming
		21CPL27/17.2	2. Make use of C compiler, IDE for programming, identify and correct the syntax and syntactic errors in programming
		21CPL27/17.3	3. Develop algorithm, flowchart and write programs to solve the given problem
		21CPL27/17.4	4. Demonstrate use of functions, recursive functions, arrays, strings, structures and pointers in problem solving.
		21CPL27/17.5	5. Document the inference and observations made from the implementation. Write algorithms ,flowcharts and program for simple problems
17	Professional	21EGH28.1	To understand and identify the Common Errors in



S.D.M Jainmatt Trust®

A.G.M RURAL COLLEGE OF ENGINEERING AND TECHNOLOGY, VARURNavagrah Teerth, NH-4 P. B. Road Opp. VRI Head Office, VARUR-581207, Hubballi, Dist. Dharwad, Karnataka
(APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELAGAUM AND RECOGNIZED BY STATE GOVT.)
Phone: 0836-2312071, Fax: 0836-2312061, E-mail: principal@agmrceet.com, Web: www.agmrceet.ac.in**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

	Writing Skills in English		Writing and Speaking.
		21EGH28.2	To Achieve better Technical writing and Presentation skills
		21EGH28.3	To read Technical proposals properly and make them to Write good technical reports.
		21EGH28.4	Acquire Employment and Workplace communication skills
		21EGH28.5	To learn about Techniques of Information Transfer through presentation in different level
18	Scientific Foundations of Health	21SFH29.1	To understand Health and wellness (and its Beliefs)
			To acquire Good Health & It's balance for positive mindset
			To inculcate and develop the healthy lifestyle habits for good health.
			To Create of Healthy and caring relationships to meet the requirements of MNC and LPG world
			To adopt the innovative & positive methods to avoid risks from harmful habits in their campus & outside the campus.
			To positively fight against harmful diseases for good health through positive mindset.
III SEM			
15	Transform Calculus, Fourier Series And Numerical Techniques	21MAT31.1	To solve ordinary differential equations using Laplace transform.
		21MAT31.2	Demonstrate the Fourier series to study the behaviour of periodic functions and their applications in system communications, digital signal processing and field theory.



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

		21MAT31.3	To use Fourier transforms to analyze problems involving continuous-time signals and to apply ZTransform techniques to solve difference equations
		21MAT31.4	To solve mathematical models represented by initial or boundary value problems involving partial differential equations
		21MAT31.5	Determine the extremals of functionals using calculus of variations and solve problems arising in dynamics of rigid bodies and vibrational analysis.
16	Digital System Design Using Verilog	21EC32.1	Simplify Boolean functions using K-map and Quine-McCluskey minimization technique.
		21EC32.2	Analyze and design for combinational logic circuits
		21EC32.3	Analyze the concepts of Flip Flops (SR, D, T and JK) and to design the synchronous sequential circuits using Flip Flops.
		21EC32.4	Model Combinational circuits (adders, subtractors, multiplexers) and sequential circuits using Verilog descriptions.
17	Basic Signal Processing	21EC33.1	Understand the basics of Linear Algebra
		21EC33.2	Analyse different types of signals and systems
		21EC33.3	Analyse the properties of discrete time signals & systemsdevice
		21EC33.4	Analyse discrete time signals & systems using Z transforms.
18	Analog Electronic Circuits	21EC34.1	Understand the characteristics of BJTs and FETs for switching and amplifier circuits
		21EC34.2	Design and analyze FET amplifiers and oscillators with different circuit configurations and biasing



S.D.M Jainmatt Trust®

A.G.M RURAL COLLEGE OF ENGINEERING AND TECHNOLOGY, VARUR

Navagrah Teerth, NH-4 P. B. Road Opp, VRL Head Office, VARUR-581207, Hubballi, Dist. Dharwad, Karnataka
(APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELAGAUM AND RECOGNIZED BY STATE GOVT.)
Phone: 0836-2312071. Fax: 0836-2312061, E-mail: principal@agmrcet.com, Web: www.agmrcet.ac.in



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

			conditions
		21EC34.3	Understand the feedback topologies and approximations in the design of amplifiers and oscillators.
		21EC34.4	Design of circuits using linear ICs for wide range applications such as ADC, DAC, filters and timers..
		21EC34.5	Understand the power electronic device components and its functions for basic power electronic circuits.
19	Analog and Digital Electronics Lab	21ECL35.1	Design and analyze the BJT/FET amplifier and oscillator circuits
		21ECL35.2	Design and test Opamp circuits to realize the mathematical computations, DAC and precision rectifiers.
		21ECL35.3	Design and test the combinational logic circuits for the given specifications.
		21ECL35.4	Test the sequential logic circuits for the given functionality
		21ECL35.5	Demonstrate the basic electronic circuit experiments using SCR and 555 timer.
20	LD (Logic Design) Lab using Pspice / MultiSIM	21EC381.1	Demonstrate the truth table of various expressions and combinational circuits using logic gates.
		21EC381.2	Design various combinational circuits such as adders, subtractors, comparators, multiplexers and code converters.
		21EC381.3	Construct flips-flops, counters and shift registers
		21EC381.4	Design and implement synchronous counters.
21	SOCIAL CONNECT &	21SCR36.1	Understand social responsibility
		21SCR36.2	Practice sustainability and creativity.



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

	RESPONSIBILITIES		
		21SCR36.3	Showcase planning and organizational skills
IV SEM			
23	Maths for Communication Engineers	21EC41.1	Recall the basic laws and definitions (with mathematical representations) in Electric and Magnetic fields.
		21EC41.2	Apply the basic laws of Electric and Magnetic fields to arrive at Divergence Theorem, Current continuity Equation, Curl, Stokes' theorem.
		21EC41.3	Apply Electric and Magnetic field concepts to arrive at Maxwell's equations, Electromagnetic wave equations and Poynting's theorem (Important concepts related to Communication link).
		21EC41.4	Recall the definitions related to Random variables and Random Processes.
		21EC41.5	Model the Random events in the Communication set-up and determine useful statistical parameters.
24	Digital Signal Processing	21EC42.1	Determine response of LTI systems using time domain and DFT techniques
		21EC42.2	Compute DFT of real and complex discrete time signals
		21EC42.3	Compute DFT using FFT algorithms
		21EC42.4	Design FIR and IIR Digital Filters
		21EC42.5	Design of Digital Filters using DSP processor
25	Circuits & Controls	21EC43.1	Analyse and solve Electric circuit, by applying, loop analysis, Nodal analysis and by applying network Theorems.
		21EC43.2	Evaluate two port parameters of a network and Apply Laplace transforms to solve electric networks.
		21EC43.3	Deduce transfer function of a given physical



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

			system, from differential equation representation or Block Diagram representation and SFG representation.
		21EC43.4	Calculate time response specifications and analyse the stability of the system.
		21EC43.5	Draw and analyse the effect of gain on system behaviour using root loci
		21EC43.6	Perform frequency response Analysis and find the stability of the system.
		21EC43.7	Represent State model of the system and find the time response of the system.
26	Communication Theory	21EC44.1	Understand the amplitude and frequency modulation techniques and perform time and frequency domain transformations.
		21EC44.2	Identify the schemes for amplitude and frequency modulation and demodulation of analog signals and compare the performance
		21EC44.3	Characterize the influence of channel noise on analog modulated signals
		21EC44.4	Understand the characteristics of pulse amplitude modulation, pulse position modulation and pulse code modulation systems.
		21EC44.5	Illustration of digital formatting representations used for Multiplexers, Vocoders and Video transmission.
27	Communication Laboratory I	21ECL46.1	Demonstrate the AM and FM modulation and demodulation by representing the signals in time and frequency domain.
		21ECL46.2	Design and test the sampling, Multiplexing and PAM with relevant circuits.



S.D.M Jainmatt Trust®

A.G.M RURAL COLLEGE OF ENGINEERING AND TECHNOLOGY, VARUR

Navagrah Teerth, NH-4 P. B. Road Opp. VRL Head Office, VARUR-581207, Hubballi, Dist. Dharwad, Karnataka
(APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELAGAUM AND RECOGNIZED BY STATE GOVT.)
Phone: 0836-2312071, Fax: 0836-2312061, E-mail: principal@agmrceet.com, Web: www.agmrceet.ac.in



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

		21ECL46.3	Demonstrate the basic circuitry and operations used in AM and FM receivers.
		21ECL46.4	Illustrate the operation of PCM and delta modulations for different input conditions.
28	C++ Basics	21EC482.1	Write C++ program to solve simple and complex problems.
		21EC482.2	Apply and implement major object-oriented concepts like message passing, function overloading, operator overloading and inheritance to solve real-world problems.
		21EC482.3	Use major C++ features such as Templates for data type independent designs and File I/O to deal with large data set.
		21EC482.4	Analyze, design and develop solutions to real-world problems applying OOP concepts of C++
29	Biology For Engineers	21BE45.1	Elucidate the basic biological concepts via relevant industrial applications and case studies.
		21BE45.2	Evaluate the principles of design and development, for exploring novel bioengineering projects.
		21BE45.3	Corroborate the concepts of biomimetics for specific requirements
		21BE45.4	Think critically towards exploring innovative biobased solutions for socially relevant problems
22	Constitution of India and Professional Ethics	21CIP47.1	Analyse the basic structure of Indian Constitution.
		21CIP47.2	Remember their Fundamental Rights, DPSP's and Fundamental Duties (FD's) of our constitution.
		21CIP47.3	know about our Union Government, political structure & codes, procedures.
		21CIP47.4	Understand our State Executive & Elections system of India.



S.D.M Jainmatt Trust®

A.G.M RURAL COLLEGE OF ENGINEERING AND TECHNOLOGY, VARUR

Navagrah Teerth, NH-4 P. B. Road Opp. VRI Head Office, VARUR-581207, Hubballi, Dist. Dharwad, Karnataka
(APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELAGAUM AND RECOGNIZED BY STATE GOVT.)
Phone: 0836-2312071, Fax: 0836-2312061, E-mail: principal@agmrcet.com, Web: www.agmrcet.ac.in



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

		21CIP47.5	Remember the Amendments and Emergency Provisions, other important provisions given by the constitution.
Universal Human Values		21UHV49.1	Holistic vision of life
		21UHV49.2	Socially responsible behavior
		21UHV49.3	Environmentally responsible work
		21UHV49.4	Ethical human conduct
		21UHV49.5	Having Competence and Capabilities for Maintaining Health and Hygiene
		21UHV49.6	Appreciation and aspiration for excellence (merit) and gratitude for all
21INT49		21INT49.1	To understand the theory concepts and implement those in Industry environment.
V SEM			
31	Digital Communication	21EC51.1	Analyze different digital modulation techniques and choose the appropriate modulation technique for the given specifications..
		21EC51.2	Test and validate symbol processing and performance parameters at the receiver under ideal and corrupted bandlimited channels.
		21EC51.3	Differentiate various spread spectrum schemes and compute the performance parameters of communication system.
		21EC51.4	Apply the fundamentals of information theory and perform source coding for given message
		21EC51.5	Apply different encoding and decoding techniques with error Detection and Correction.
32	Object Oriented Programming with	21EC52.1	Use OOP concepts effectively to build simple application programs.



S.D.M Jainmatt Trust®

A.G.M RURAL COLLEGE OF ENGINEERING AND TECHNOLOGY, VARUR

Navgrah Teerth, NH-4 P. B. Road Opp. VRI Head Office, VARUR-581207, Hubballi, Dist. Dharwad, Karnataka
(APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELAGAUAM AND RECOGNIZED BY STATE GOVT.)

Phone: 0836-2312071, Fax: 0836-2312061, E-mail: principal@agmrcet.com, Web: www.agmrcet.ac.in



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

	Java & Data Structures	21EC52.2	Set up a Java JDK environment to create, debug and run simple java programs
		21EC52.3	Explain and implement the object oriented core-concepts such as class, object, inheritance and exception handling using JAVA
		21EC52.4	Implement the data structures such as Arrays, Lists, Stack, Queue and Trees using Java
		21EC52.5	Make a decision on choosing a suitable data structure for a specific application program
33	Computer Communication Networks	21EC53.1	Understand the concepts of networking thoroughly
		21EC53.2	Identify the protocols and services of different layers.
		21EC53.3	Distinguish the basic network configurations and standards associated with each network.
		21EC53.4	Discuss and analyze the various applications that can be implemented on networks.
33	Microwave Theory and Antennas	21EC54.1	Describe the use and advantages of microwave transmission
		21EC54.2	Analyze various parameters related to transmission lines.
		21EC54.3	Identify microwave devices for several applications.
		21EC54.4	Analyze various antenna parameters and their significance in building the RF system
		21EC54.5	Identify various antenna configurations for suitable applications.
34	Communication Lab II	21ECL55.1	Design and test the digital modulation circuits and display the waveforms.
		21ECL55.2	To Implement the source coding algorithm using C/C++/ MATLAB code



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CO STATEMENT FOR THE SCHEME 2021 (BATCH 2021-2025)

		21ECL55.3	To Implement the Error Control coding algorithms using C/C++/ MATLAB code
		21ECL55.4	Illustrate the operations of networking concepts and protocols using C programming and network simulators.
35	Research Methodology & Intellectual Property Rights	21RMI56.1	To know the meaning of engineering research
		21RMI56.2	To know the procedure of Literature Review and Technical Reading
		21RMI56.3	To know the fundamentals of patent laws and drafting procedure.
		21RMI56.4	Understanding the copyright laws and subject matters of copyrights and designs
		21RMI56.5	Understanding the basic principles of design rights.
36	Environmental Studies	21CIV57.1	Understand the concepts of analog to digital conversion of signals and frequency domain sampling of signals.
		21CIV57.2	Modeling of discrete time signals and systems and verification of its properties and results.
		21CIV57.3	Implementation of discrete computations using DSP processor and verify the results.
		21CIV57.4	Realize the digital filters using a simulation tool and analyze the response of the filter for an audio signal.
37	IoT (Internet of Things) Lab	21EC581.1	Understand internet of Things and its hardware and software components.
		21EC581.2	Interface I/O devices, sensors & communication modules
		21EC581.3	Remotely monitor data and control devices