EAST POINT COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Course Outcomes-2022 Scheme

S.No.	Subject Code	Course Code	Course Outcomes
1	BMATE101 Mathematics-I for Computer Science and Engineering stream	C101.1	Apply the knowledge of calculus to solve problems related to polar curves and learn the notion of partial differentiation to compute rate of change of multivariate functions
		C101.2	Analyze the solution of linear and nonlinear ordinary differential equations
		C101.3	Apply the concept of change of order of integration and variables to evaluate multiple integrals and their usage in computing area and volume
		C101.4	Make use of matrix theory for solving the system of linear equations and compute eigenvalues and eigenvectors
		C101.5	Familiarize with modern mathematical tools namely MATHEMATICA/ MATLAB/ PYTHON/SCILAB

S.No.	Subject Code	Course Code	Course Outcomes
2	BCHEE102 Chemistry for CSE Stream	C102.1	Identify the terms processes involved in scientific and engineering and applications
		C102.2	Explain the phenomena of chemistry to describe the methods of engineering processes
		C102.3	Solve the problems in chemistry that are pertinent in engineering applications
		C102.4	Apply the basic concepts of chemistry to explain the chemical properties and processes
		C102.5	Analyze properties and multi processes associated with chemical substances in disciplinary situations

S.No.	Subject Code	Course Code	Course Outcomes
3	BCEDK103 Computer Aided Engineering Drawing	C103.1	Draw and communicate the objects with definite shape and dimensions
		C103.2	Recognize and draw the shape and size of objects through different views
		C103.3	Develop the lateral surfaces of the object
		C103.4	Create a Drawing views using CAD software

		C103.5	Identify the interdisciplinary engineering components or systems through its graphical representation

S.No.	Subject Code	Course Code	Course Outcomes
4	BESCK104B Introduction to Electrical Engineering	C104.1	Understand the concepts of various energy sources and Electric circuits
		C104.2	Apply the basic Electrical laws to solve circuits
		C104.3	Discuss the construction and operation of various Electrical Machines
		C104.4	Identify suitable Electrical machine for practical implementation
		C104.5	Explain the concepts of electric power transmission and distribution, electricity billing, circuit protective devices and personal safety measures

S.No.	Subject Code	Course Code	Course Outcomes
5	BPLCK105B Introduction to Python Programming	C105.1	Demonstrate proficiency in handling loops and creation of functions
		C105.2	Identify the methods to create and manipulate lists, tuples and dictionaries
		C105.3	Develop programs for string processing and file organization
		C105.4	Interpret the concepts of Object-Oriented Programming as used in Python

S.No.	Subject Code	Course Code	Course Outcomes
6	BENGK106 Professional Writing Skills in English	C106.1	Understand and apply the Fundamentals of Communication Skills in their communication skills
		C106.2	Identify the nuances of phonetics, intonation and enhance pronunciation skills
		C106.3	To impart basic English grammar and essentials of language skills as per present requirement
		C106.4	Understand and use all types of English vocabulary and language proficiency
		C106.5	Adopt the Techniques of Information Transfer through presentation

S.No.	Subject Code	Course Code	Course Outcomes
7	BICOK107 Indian Constitution	C107.1	Analyse the basic structure of Indian Constitution
		C107.2	Remember their Fundamental Rights, DPSP's and Fundamental Duties (FD's) of our constitution
		C107.3	Know about our Union Government, political structure & codes, procedures
		C107.4	Understand our State Executive & Elections system of India
		C107.5	Remember the Amendments and Emergency Provisions, other important provisions given by the constitution

S.No.	Subject Code	Course Code	Course Outcomes
8	BSFHK158 Innovation and Design Thinking	C108.1	To understand and analyse about Health and wellness (and its Beliefs) & It's balance for positive mindset
		C108.2	Develop the healthy lifestyles for good health for their better future
		C108.3	Build a Healthy and caring relationships to meet the requirements of good/social/positive life
		C108.4	To learn about Avoiding risks and harmful habits in their campus and outside the campus for their bright future
		C108.5	Prevent and fight against harmful diseases for good health through positive mindset

S.No.	Subject Code	Course Code	Course Outcomes
9	BMATE201 Mathematics-II for EES	C109.1	Understand the applications of vector calculus refer to solenoidal, irrotational vectors, line integral and surface integral
		C109.2	Demonstrate the idea of Linear dependence and independence of sets in the vector space, and linear transformation
		C109.3	To understand the concept of Laplace transform and to solve initial value problems
		C109.4	Apply the knowledge of numerical methods in solving physical and engineering phenomena
		C109.5	Get familiarize with modern mathematical tools namely MATHEMATICA/MATLAB/PYTHON/ SCILAB

S.No.	Subject Code	Course Code	Course Outcomes
10	BPHYE202 Applied Physics for EES	C110.1	Describe the fundamental principles of the Quantum Mechanics and the essentials of Photonics
		C110.2	Elucidate the concepts of conductors, dielectrics and superconductivity
		C110.3	Discuss the fundamentals of vector calculus and their applications in Maxwell's Equations and EM Waves
		C110.4	Summarize the properties of semiconductors and the working principles of semiconductor devices
		C110.5	Practice working in groups to conduct experiments in physics and perform precise and honest measurements

S.No.	Subject Code	Course Code	Course Outcomes
11	BBEE203 Basic Electronics	C111.1	Develop the basic knowledge on construction, operation and characteristics of semiconductor devices
		C111.2	Apply the acquired knowledge to construct small scale circuits consisting of semiconductor devices
		C111.3	Develop competence knowledge to construct basic digital circuit by make use of basic gate and its function
		C111.4	Construct the conceptual blocks for basic communication system
		C111.5	Apply the knowledge of various transducers principle in sensor system

S.No.	Subject Code	Course Code	Course Outcomes
12	BESCK204E Introduction to C Programming	C112.1	Elucidate the basic architecture and functionalities of a computer and also recognize the hardware parts
		C112.2	Apply programming constructs of C language to solve the real world problem
		C112.3	Explore user-defined data structures like arrays in implementing solutions to problems like searching and sorting
		C112.4	Explore user-defined data structures like structures, unions and pointers in implementing solutions
		C112.5	Design and Develop Solutions to problems using modular programming constructs using functions

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13	BETCK205J Introduction to Embedded System	C113.1	Explain characteristics of Embedded System design
		C113.2	Acquire knowledge about basic concepts of circuit emulators, debugging and RTOS
		C113.3	Analyse embedded system software and hardware requirements
		C113.4	Develop programming skills in embedded systems for various applications
		C113.5	Design basic embedded system for real time applications

S.No.	Subject Code	Course Code	Course Outcomes
14	BPWSK206 Professional Writing Skills in English	C114.1	To understand and identify the Common Errors in Writing and Speaking
		C114.2	To Achieve better Technical writing and Presentation skills
		C114.3	To read Technical proposals properly and make them to Write good technical reports
		C114.4	Acquire Employment and Workplace communication skills
		C114.5	To learn about Techniques of Information Transfer through presentation in different level

S.No.	Subject Code	Course Code	Course Outcomes
15	BKBKK207 Balake Kannada	C115.1	To understand the necessity of learning of local language for comfortable life.
		C115.2	To speak, read and write Kannada language as per requirement.
		C115.3	To communicate (converse) in Kannada language in their daily life with kannada speakers.
		C115.4	To Listen and understand the Kannada language properly.
		C115.5	To speak in polite conservation.
	OR		
	BKBKK207 Samskrutika Kannada	C115.1	ಕನ್ನಡ ಭಾಷೆ, ಸಾಹಿತ್ಯ ಮತ್ತು ಕನ್ನಡದ ಸಂಸ್ಕೃತಿಯ ಕುರಿತು ಅರಿವು ಮೂಡಿರುತ್ತದೆ.
		C115.2	ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಪ್ರಧಾನ ಭಾಗವಾದ ಆಧುನಿಕ ಪೂರ್ವ ಮತ್ತು ಆಧುನಿಕ ಕಾವ್ಯಗಳನ್ನು ಸಾಂಕೇತಿಕವಾಗಿ ಕಲಿತು ಹೆಚ್ಚಿನ ಓದಿಗೆ ಮತ್ತು ಜ್ಞಾನಕ್ಕೆ ಸ್ಫೂರ್ತಿ ಮೂಡುತ್ತದೆ.
		C115.3	ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಸಾಹಿತ್ಯ ಮತ್ತು ಸಂಸ್ಕೃತಿಯ ಬಗ್ಗೆ ಅರಿವು ಹಾಗೂ ಆಸಕ್ತಿಯನ್ನು ಹೆಚ್ಚಾಗುತ್ತದೆ.

S.No.	Subject Code	Course Code	Course Outcomes
		C115.4	ತಾಂತ್ರಿಕ ವ್ಯಕ್ತಿಗಳ ಪರಿಚಯ ಹಾಗೂ ಅವರುಗಳ ಸಾಧಿಸಿದ ವಿಷಯಗಳನ್ನು ತಿಳಿದುಕೊಂಡು ನಾಡಿನ ಇನ್ನಿತರ ವ್ಯಕ್ತಿಗಳ ಬಗ್ಗೆ ತಿಳಿದುಕೊಳ್ಳಲು ಕೌತುಕತೆ ಹೆಚ್ಚಾಗುತ್ತದೆ.
		C115.5	ಸಾಂಸ್ಕೃತಿಕ, ಜನಪದ ಹಾಗೂ ಪ್ರವಾಸ ಕಥನಗಳ ಪರಿಚಯ ಮಾಡಿಕೊಡುವುದು.
16	BIDTK258 Innovation and Design Thinking	C116.1	Appreciate various design process procedure
		C116.2	Generate and develop design ideas through different technique
		C116.3	Identify the significance of reverse Engineering to Understand products
		C116.4	Draw technical drawing for design ideas

S.No.	Subject Code	Course Code	Course Outcomes
17	BMATEC301 AV Mathematics-III for EC Engineering	C201.1	Demonstrate the Fourier series to study the behavior of periodic functions and their applications in system communications, digital signal processing, and field theory
		C201.2	To use Fourier transforms to analyze problems involving continuous-time signals
		C201.3	To apply Z-Transform techniques to solve difference equations
		C201.4	Understand that physical systems can be described by differential equations and solve such equations
		C201.5	Make use of correlation and regression analysis to fit a suitable mathematical model for statistical data

S.No.	Subject Code	Course Code	Course Outcomes
18	BEC302 Digital System Design Using Verilog	C202.1	Simplify Boolean functions using K-map and Quine-McCluskey minimization technique
		C202.2	Analyze and design for combinational logic circuits
		C202.3	Analyze the concepts of Flip Flops (SR, D, T and JK) and to design the synchronous sequential circuits using Flip Flops
		C202.4	Model Combinational circuits (adders, subtractors, multiplexers) and sequential circuits using Verilog descriptions

S.No.	Subject Code	Course Code	Course Outcomes
19	BEC303 Electronic Principles and Circuits	C203.1	Understand the characteristics of BJTs and FETs for switching and amplifier circuits
		C203.2	Design and analyze amplifiers and oscillators with different circuit configurations and biasing conditions
		C203.3	Understand the feedback topologies and approximations in the design of amplifiers and oscillators
		C203.4	Design of circuits using linear ICs for wide range applications such as ADC, DAC, filters and timers
		C203.5	Understand the power electronic device components and its functions for basic power electronic circuits

S.No.	Subject Code	Course Code	Course Outcomes
20	BEC304 Network Analysis	C204.1	Determine currents and voltages using source transformation/ source shifting/ mesh/ nodal analysis and reduce given network using star- delta transformation
		C204.2	Solve problems by applying Network Theorems and electrical laws to reduce circuit complexities and to arrive at feasible solutions
		C204.3	Analyse the circuit parameters during switching transients and apply Laplace transform to solve the given network
		C204.4	Evaluate the frequency response for resonant circuits and the network parameters for two port networks

S.No.	Subject Code	Course Code	Course Outcomes
21	BECL305 Analog and Digital Systems Design Lab	C205.1	Design and analyze the BJT/FET amplifier and oscillator circuits
		C205.2	Design and test Opamp circuits to realize the mathematical computations, DAC and precision rectifiers
		C205.3	Design and test the combinational logic circuits for the given specifications
		C205.4	Test the sequential logic circuits for the given functionality
		C205.5	Demonstrate the basic circuit experiments using 555 timer

S.No.	Subject Code	Course Code	Course Outcomes
22	BEC306B Sensors and Instrumentation	C206.1	Understand the material properties required to make sensors
		C206.2	Understand the principle of transducers for measuring physical parameters
		C206.3	Describe the manufacturing process of sensors
		C206.4	Analyze the instrument characteristics and errors
		C206.5	Describe the principle of operation and develop circuits for multirange Ammeters, Voltmeters and Bridges to measure passive component values and frequency

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23	BSCK307 Social Connect and Responsibilty	C207.1	Communicate and connect to the surrounding
		C207.2	Create a responsible connection with the society
		C207.3	Involve in the community in general in which they work
		C207.4	Notice the needs and problems of the community and involve them in problem –solving
		C207.5	Develop among themselves a sense of social & civic responsibility & utilize their knowledge in finding practical solutions to individual and community problems
		C207.6	Develop competence required for group-living and sharing of responsibilities & gain skills in mobilizing community participation to acquire leadership qualities and democratic attitudes

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24	BEC358A LABVIEW Programming	C208.1	Use LabVIEW to create data acquisition, analysis and display operations
		C208.2	Create user interfaces with charts, graph and buttons
		C208.3	Use the programming structures and data types that exist in LabVIEW
		C208.4	Use various editing and debugging techniques

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25	BNSK459 Physical Education(Sports & Athletics)-II	C209.1	Understand the importance of his / her responsibilities towards society
		C209.2	Analyse the environmental and societal problems/issues and will be able to design solutions for the same

		C209.3	Evaluate the existing system and to propose practical solutions for the same for sustainable development
		C209.4	Implement government or self-driven projects effectively in the field
		C209.5	Develop capacity to meet emergencies and natural disasters & practice national integration and social harmony in general
		OR	
	BPEK459 National Service Scheme (NSS)	C209.1	Understand the fundamental concepts and skills of Physical Education, Health, Nutrition and Fitness
		C209.2	Familiarization of health-related Exercises, Sports for overall growth and development
		C209.3	Create a foundation for the professionals in Physical Education and Sports
		C209.4	Participate in the competition at regional / state / national / international levels
		C209.5	Create consciousness among the students on Health, Fitness and Wellness in developing and maintaining a healthy lifestyle
		OR	
	BYOK359 Yoga for a Better Life	C209.1	Understand the meaning, aim and objectives of Yoga
		C209.2	Perform Suryanamaskar and able to Teach its benefits
		C209.3	Understand and teach different Asanas by name, its importance, methods and benefits
		C209.4	Instruct Kapalabhati and its need and importance
		C209.5	Teach different types of Pranayama by its name, precautions, procedure and uses
		C209.6	Coach different types of Kriyas , method to follow and usefulness

S.No.	Subject Code	Course Code	Course Outcomes
26	BEC401 Electromagnetic Theory	C210.1	Evaluate problems on electrostatic force, electric field due to point, linear, volume charges by applying conventional methods and charge in a volume
		C210.2	Apply Gauss law to evaluate Electric fields due to different charge distributions and Volume Charge distribution by using Divergence Theorem
		C210.3	Determine potential and energy with respect to point charge and capacitance using Laplace equation and Apply Biot-Savart's and Ampere's laws for evaluating Magnetic field for different current configurations

S.No.	Subject Code	Course Code	Course Outcomes
		C210.4	Calculate magnetic force, potential energy and Magnetization with respect to magnetic materials and voltage induced in electric circuits
		C210.5	Apply Maxwell's equations for time varying fields, EM waves in free space and conductors and Evaluate power associated with EM waves using Poynting theorem

S.No.	Subject Code	Course Code	Course Outcomes
27	BEC402 Principles of Communication Systems	C211.1	Understand the principles of analog communication systems and noise modelling
		C211.2	Identify the schemes for analog modulation and demodulation and compare their performance
		C211.3	Design of PCM systems through the processes sampling, quantization and encoding
		C211.4	Describe the ideal condition, practical considerations of the signal representation for baseband transmission of digital signals
		C211.5	Identify and associate the random variables and random process in Communication system design
		C211.6	Understand the principles of analog communication systems and noise modelling
		C211.7	Identify the schemes for analog modulation and demodulation and compare their performance

S.No.	Subject Code	Course Code	Course Outcomes
28	BEC403 Control Systems	C212.1	Deduce transfer function of a given physical system, from differential equation representation or Block Diagram representation and SFG representation
		C212.2	Calculate time response specifications and analyse the stability of the system
		C212.3	Draw and analyse the effect of gain on system behaviour using root loci
		C212.4	Perform frequency response Analysis and find the stability of the system
		C212.5	Represent State model of the system and find the time response of the system

S.No.	Subject Code	Course Code	Course Outcomes
29	BECL404 Communication Laboratory	C213.1	Illustrate the AM generation and detection using suitable electronic circuits
		C213.2	Design of FM circuits for modulation, demodulation and noise suppression

S.No.	Subject Code	Course Code	Course Outcomes
		C213.3	Design and test the sampling, Multiplexing and pulse modulation techniques using electronic hardware
		C213.4	Design and Demonstrate the electronic circuits used for RF transmitters and receivers

S.No.	Subject Code	Course Code	Course Outcomes
30	BEC405A Microcontrollers	C214.1	Describe the difference between Microprocessor and Microcontroller, Types of Processor Architectures and Architecture of 8051Microcontroller
		C214.2	Discuss the types of 8051 Microcontroller Addressing modes & Instructions with Assembly Language Programs
		C214.3	Explain the programming operation of Timers/Counters and Serial port of 8051 Microcontroller
		C214.4	Illustrate the Interrupt Structure of 8051 Microcontroller & its programming
		C214.5	Develop C programs to interface I/O devices with 8051 Microcontroller

S.No.	Subject Code	Course Code	Course Outcomes
31	BECL456A Microcontroller Lab	C215.1	Write a Assembly Language/ C programs in 8051 for solving simple problems that manipulate input data using different instructions
		C215.2	Develop Testing and experimental procedures on 8051 Microcontroller, Analyze their operation under different cases
		C215.3	Develop programs for 8051 Microcontroller to implement real world problems
		C215.4	Develop Microcontroller applications using external hardware interface

S.No.	Subject Code	Course Code	Course Outcomes
32	BBOK407 Biology for Engineers	C216.1	Elucidate the basic biological concepts via relevant industrial applications and case studies
		C216.2	Evaluate the principles of design and development, for exploring novel bioengineering projects
		C216.3	Collaborate the concepts of biomimetics for specific requirements
		C216.4	Think critically towards exploring innovative biobased solutions for socially relevant problems

S.No.	Subject Code	Course Code	Course Outcomes
33	BUHK408 Universal Human Values	C217.1	They would become more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind
		C217.2	They would have better critical ability
		C217.3	They would also become sensitive to their commitment towards what they have understood (human values, human relationship and human society)
		C217.4	It is hoped that they would be able to apply what they have learnt to their own self in different day-to-day settings in real life, at least a beginning would be made in this direction

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34	BNSK459 Physical Education(Sports & Athletics)-II	C218.1	Understand the importance of his / her responsibilities towards society
		C218.2	Analyse the environmental and societal problems/issues and will be able to design solutions for the same
		C218.3	Evaluate the existing system and to propose practical solutions for the same for sustainable development
		C218.4	Implement government or self-driven projects effectively in the field
		C218.5	Develop capacity to meet emergencies and natural disasters & practice national integration and social harmony in general
	OR		
	BPEK459 National Service Scheme (NSS)	C218.1	Understand the ethics and moral values in sports and athletics
		C218.2	Perform in the selected sports or athletics of student's choice
		C218.3	Understand the roles and responsibilities of organisation and administration of sports and games
	OR		
	BYOK459 Yoga for a Better Life	C218.1	Understand the meaning, aim and objectives of Yoga
		C218.2	Perform Suryanamaskar and able to Teach its benefits
		C218.3	Understand and teach different Asanas by name, its importance, methods and benefits
		C218.4	Instruct Kapalabhati and its need and importance

		C218.5	Teach different types of Pranayama by its name, precautions, procedure and uses