DEPARTMENT OF CS IOT

2022 REGULATION

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Bachelor of Artificial and machine learning Engineering curriculum is designed to impart knowledge,skill and attitude on the graduates to

PEO1	Graduates of the program will analyze, design and solve problems related to Computer Science and Engineering and possess adaptability to changes in technology by self-learning.
PEO2	Graduates are provided with an educational foundation that prepares them for leadership roles in their diverse career paths and to pursue higher education.
PEO3	Graduates of the program are capable of delivering the software product for various real life problems within the scheduled time.
PEO4	Graduates must develop professional and communication skills for their successful professional career.

Programme Outcomes(POs)

Engineering Graduates will be able to:

PO1	**Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	**Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	**Design/Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4	**Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	**The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Programme Specific Outcomes (PSOs)

PSO1	Analyze, design, develop and optimize solutions in Java, C++, .NET Technology and Android based applications.
PSO2	Apply concepts in core areas of Computer Science – Algorithms and Data Structures, Operating Systems, Database Management Systems, Computer Networks, Computer Architecture and Software Engineering to solve technical issues.

LIST OF COURSES
REGULATION 2022

SI.NO	SUB.CODE	SUB.NAME
1	BMATS101	ENGINEERING MATHEMATICS FOR CSE STREAM-I
2	BCHES102	CHEMISTRY FOR CSE
3	BCEDK103	COMPUTER AIDED ENGINEERING DRAWING
4	BESCK104B	INTRODUCTION TO ELECTRICAL ENGINEERING
5	BPLCK105B	INTRODUCTION TO PYTHON PROGRAMMING
6	BENGK106	COMMUNICATIVE ENGLISH
7	BKSKK107/BKBKK107	SAMSKRUTHIKA KANNADA/BALAKE KANNADA
8	BSFHK158	SCIENTIFIC FOUNDATION FOR HEALTH
9	BMATS201	ENGINEERING MATHEMATICS FOR CSE STREAM-II
10	BPHYS202	PHYSICS FOR CSE
11	BPOPS203	PRINCIPLES OF PROGRAMMING USING C
12	BESCK204C	INTRODUCTION TO ELECTRONICS COMMUNICATION
13	BETCK205J	INTRODUCTION TO EMBEDDED SYSTEM
14	BPWSK206	PROFESSIONAL WRITING SKILLS IN ENGLISH
15	BICOK207	INDIAN CONSTITUTION
16	BIDTK258	INNOVATION AND DESIGN THINKING (IDT)

COURSE OUTCOME FOR DEPARTMENT OF CS IOT

DEGREE	**U.G**
PROGRAMME	**B.E – CS IOT**
ACADEMIC YEAR	**2022-23**
REGULATION	**2022**

FIRST SEMESTER	
1.Course Code and Name: **BMATS101** ENGINEERING MATHEMATICS FOR CSE STREAM-I	
CO Statements	
At the end of the course, learners will be able	
CO1	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
CO2	analyze the solution of linear and nonlinear ordinary differential equation
CO3	get acquainted and to apply modular arithmetic to computer algorithms
CO4	make use of matrix theory for solving the system of linear equations and compute eigenvalues and eigenvectors
CO5	familiarize with modern mathematical tools namely MATHEMATICA/MATLAB/ PYTHON/ SCILAB
2.Course Code and Name : **BCHES102 CHEMISTRY FOR CSE**	
CO Statements	
At the end of the course, learners will be able	
CO1	Identify the terms processes involved in scientific and engineering and applications
CO2	Explain the phenomena of chemistry to describe the methods of engineering processes
CO3	Solve the problems in chemistry that are pertinent in engineering applications
CO4	Apply the basic concepts of chemistry to explain the chemical properties and processes
CO5	Analyze properties and multidisciplinary situations processes associated with chemical substances in engineering

3.Course Code and Name: **BCEDK103 COMPUTER AIDED ENGINEERING DRAWING**	
CO Statements	
At the end of the course, learners will be able	
CO1	Draw and communicate the objects with definite shape and dimensions
CO2	Recognize and Draw the shape and size of objects through different views
CO3	Develop the lateral surfaces of the object
CO4	Create a Drawing views using CAD software
CO5	Identify the interdisciplinary engineering components or systems through its graphical representation.
4.Course Code and Name: **BESCK104B INTRODUCTION TO ELECTRICAL ENGINEERING**	
CO Statements	
At the end of the course, learners will be able	
CO1	Understand the concepts of various energy sources and Electric circuits.
CO2	Apply the basic Electrical laws to solve circuits
CO3	Discuss the construction and operation of various Electrical Machines.
CO4	Identify suitable Electrical machine for practical implementation.
CO5	Explain the concepts of electric power transmission and distribution, electricity billing, circuit protective devices and personal safety measures.
5.Course Code and Name: **BPLCK105B INTRODUCTION TO PYTHON PROGRAMMING**	
CO Statements	
At the end of the course, learners will be able	
CO1	Demonstrate proficiency in handling loops and creation of functions
CO2	Identify the methods to create and manipulate lists, tuples and dictionaries
CO3	Develop programs for string processing and file organization
CO4	Interpret the concepts of Object-Oriented Programming as used in Python.
6.Course Code and Name**: BENGK106 COMMUNICATIVE ENGLISH**	
CO Statements	
At the end of the course, learners will be able	
CO1	Understand and apply the Fundamentals of Communication Skills in their communication skills.
CO2	Identify the nuances of phonetics, intonation and enhance pronunciation skills.
CO3	To impart basic English grammar and essentials of language skills as per present

	requirement.
CO4	Understand and use all types of English vocabulary and language proficiency
CO5	Adopt the Techniques of Information Transfer through presentation
7.Course Code and Name: **BKSKK107/BKBKK107 SAMSKRUTHIKA KANNADA/BALAKE KANNADA**	
CO Statements	
At the end of the course, learners will be able	
CO1	To Create the awareness regarding the necessity of learning local language for comfortable and healthy life.
CO2	To enable learners to Listen and understand the Kannada language properly.
CO3	To speak, read and write Kannada language as per requirement.
CO4	To train the learners for correct and polite conservation
CO5	To know about Karnataka state and its language, literature and General information about this state.
8.Course Code and Name**: BSFHK158 SCIENTIFIC FOUNDATION FOR HEALTH**	
CO Statements	
At the end of the course, learners will be able	
CO1	To understand and analyse about Health and wellness (and its Beliefs) & It's balance for positive mindset.
CO2	Develop the healthy lifestyles for good health for their better future.
CO3	Build a Healthy and caring relationships to meet the requirements of good/social/positive life
CO4	To learn about Avoiding risks and harmful habits in their campus and outside the campus for their bright future.
CO5	Prevent and fight against harmful diseases for good health through positive mindset.
SECOND SEMESTER	
11.Course Code and Name: **BMATS201 ENGINEERING MATHEMATICS FOR CSE STREAM-II**	
CO Statements	
At the end of the course, learners will be able	
CO1	Apply the concept of change of order of integration and variables to evaluate multiple integrals and their usage in computing area and volume.
CO2	Understand the applications of vector calculus refer to solenoidal, and irrotational vectors. Orthogonal curvilinear coordinates
CO3	Demonstrate the idea of Linear dependence and independence of sets in the vector space, and linear transformation
CO4	Apply the knowledge of numerical methods in analyzing the discrete data and solving

	the physical and engineering problems.
CO5	Get familiarize with modern mathematical tools namely MATHEMATICA/ MATLAB /PYTHON/ SCILAB
12.Course Code and Name: **BPHYS202 PHYSICS FOR CSE**	
CO Statements	
At the end of the course, learners will be able	
CO1	Describe the principles of LASERS and Optical fibers and their relevant applications.
CO2	Discuss the basic principles of the Quantum Mechanics and its application in Quantum Computing.
CO3	Summarize the essential properties of superconductors and its applications in qubits.
CO4	Illustrate the application of physics in design and data analysis.
CO5	Practice working in groups to conduct experiments in physics and perform precise and honest measurements.
13.Course Code and Name: **BPOPS203 PRINCIPLES OF PROGRAMMING USING C**	
CO Statements	
At the end of the course, learners will be able	
CO1	Elucidate the basic architecture and functionalities of a computer and also recognize the hardware parts.
CO2	Apply programming constructs of C language to solve the real world problem
CO3	Explore user-defined data structures like arrays in implementing solutions to problems like searching and sorting
CO4	Explore user-defined data structures like structures, unions and pointers in implementing solutions
CO5	Design and Develop Solutions to problems using modular programming constructs using functions
14.Course Code and Name**: BESCK204C INTRODUCTION TO ELECTRONICS COMMUNICATION**	
CO Statements	
At the end of the course, learners will be able	
CO1	Prepare students with fundamental knowledge/ overview in the field of Electronics and Communication Engineering.
CO2	Equip students with a basic foundation in electronic engineering required for comprehending the operation and application of electronic circuits, logic design, embedded systems, and communication systems.
CO3	Professionalism & Learning Environment: To inculcate in first-year engineering students an ethical and professional attitude by providing an academic environment inclusive of effective communication, teamwork, ability to relate engineering issues to a broader social context, and life-long learning needed for a successful professional career.

15.Course Code and Name: **BETCK205J INTRODUCTION TO EMBEDDED SYSTEM**	
CO Statements	
At the end of the course, learners will be able	
CO1	Explain characteristics of Embedded System design
CO2	Acquire knowledge about basic concepts of circuit emulators, debugging and RTOS
CO3	Analyse embedded system software and hardware requirements
CO4	Develop programming skills in embedded systems for various applications.
CO5	Design basic embedded system for real time applications

16.Course Code and Name: **BPWSK206 PROFESSIONAL WRITING SKILLS IN ENGLISH**	
CO Statements	
At the end of the course, learners will be able	
CO1	To understand and identify the Common Errors in Writing and Speaking.
CO2	To Achieve better technical writing and Presentation skills.
CO3	To read Technical proposals properly and make them to Write good technical reports
CO4	Acquire Employment and Workplace communication skills
CO5	To learn about Techniques of Information Transfer through presentation in different level

17.Course Code and Name: **BICOK207 INDIAN CONSTITUTION**	
CO Statements	
At the end of the course, learners will be able	
CO1	Analyse the basic structure of Indian Constitution.
CO2	Remember their Fundamental Rights, DPSP's and Fundamental Duties (FD's) of our constitution.
CO3	Know about our Union Government, political structure & codes, procedures.
CO4	Understand our State Executive & Elections system of India
CO5	Remember the Amendments and Emergency Provisions, other important provisions given by the constitution.

3.Course Code and Name: **BIDTK258 INNOVATION AND DESIGN THINKING (IDT)**	
CO Statements	
At the end of the course, learners will be able	
CO1	Appreciate various design process procedure
CO2	Generate and develop design ideas through different technique
CO3	Identify the significance of reverse Engineering to Understand products
CO4	Draw technical drawing for design ideas