SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)

Accredited by NBA | Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi

Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka

Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.

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Course Outcome Statements of 2018 Scheme

The below table represents the 2018 Scheme Course Outcome Statements of the courses offered from 1st semester to 2nd semester of Basic Science.
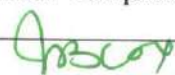
	Course Outcome Statement
Course Code	**18MAT11**
Course Name	**Calculus and Linear Algebra**
CO1	Apply the knowledge of calculus to solve problems related to polar curves and its applications in determining the bentness of a curve.
CO2	Learn the notion of partial differentiation to calculate rates of change of multivariate functions and solve problems related to composite functions and Jacobians.
CO3	Apply the concept of change of order of integration and variables to evaluate multiple integrals and their usage in computing the area and volumes.
CO4	Solve first-order linear/nonlinear differential equations analytically using standard methods.
CO5	Make use of matrix theory for solving system of linear equations and compute Eigen values and Eigen vectors required for matrix diagonalization process.
Course Code	**18CHE12**
Course Name	**Engineering Chemistry**
CO1	Use of free energy in equilibria, rationalize bulk properties and processes using thermodynamic considerations, electrochemical energy systems.
CO2	Causes & effects of corrosion of metals and control of corrosion. Modification of surface properties of metals to develop resistance to corrosion, wear, tear, impact etc. by electroplating and electroless plating
CO3	Production and consumption of energy for industrialization of country and living standards of people. Electrochemical and concentration cells. Classical, modern batteries and fuel cells. Utilisation of solar energy for different useful forms of energy.
CO4	Environmental pollution, waste management and water chemistry.
CO5	Different techniques of instrumental methods of analysis. Fundamental principles of nanomaterials.
Course Code	**18CPS13**
Course Name	**C Programming for Problem Solving**
CO1	Illustrate simple algorithms from different domains such as mathematics and physics, etc.
CO2	Construct a programming solution to the given problem using C
CO3	Modularize the given problem using arrays and identify syntax and logical errors in C program.
CO4	Modularize the given problem using functions and structures
Course Code	**18ELN14**
Course Name	**Basic Electronics**
CO1	Describe the operation of diodes, rectifiers and working principles of voltage regulators.
CO2	Explain the construction and working of FET, SCR, OP AMP applications.
CO3	Understand BJT as amplifiers, feedback amplifiers, oscillators and IC 555.
CO4	Explain the different number systems and their conversions, construct Combinational and sequential logic circuits using flip flops, basic principle of operation of communication systems.

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Course Code	18ME15
Course Name	**Elements of Mechanical Engineering**
CO1	Identify different sources of energy and their conversion process, understand the basic concepts of thermodynamics and thermodynamic properties of steam.
CO2	Explain the working principle of boilers, hydraulic turbines and pumps.
CO3	Explain the working principle of IC engines, refrigeration and air conditioning.
CO4	Recognize various engineering materials and its applications, understand various metal joining processes and power transmission elements.
CO5	Discuss the working of conventional machine tools, machining processes, tools and accessories,and describe the advanced manufacturing systems.
Course Code	**18CHEL16**
Course Name	**Engineering Chemistry Laboratory**
CO1	Conduct different types of titrations for the estimation of total hardness and COD of waste water
CO2	Conduct volumetric analysis for the estimation of percentage iron and copper, estimation of CaO in cement solution, Chlorine in bleaching powder
CO3	Handling modern tools to estimate components in the acid mixture, determine ferrous ammonium sulphate content, strength of weak acids.
CO4	Determine viscosity coefficient of organic liquids and colorimetric determination of copper.
Course Code	**18CPL17**
Course Name	**Computer Programming Laboratory**
CO1	Identify the core hardware components of a computer, their working and associated software.
CO2	Realize mathematical problems using algorithms, flowcharts and transforming it into simple C programs with suitable and relevant concepts.
CO3	To write suitable C functions and using it efficiently to solve various types of mathematical problems.
CO4	Suitably know the usage of C programming concepts like structures and pointers and implement the same.
Course Code	**18EGH18**
Course Name	**Technical English-I**
CO1	Use grammatical English and essentials of language skills and identify the nuances of phonetics, intonation and flawless pronounciation.
CO2	Implement English vocabulary at command and language proficiency.
CO3	Identify common errors in spoken and written communication.
CO4	Understand and improve the non verbal communication and kinesics.
CO5	Perform well in campus recruitment, engineering and all other general competitive examinations.
Course Code	**18MAT21**
Course Name	**Advanced Calculus and Numerical Methods**

CO1	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
CO2	Demonstrate various physical models through higher order differential equations and solve such linear ordinary differential equations
CO3	Construct a variety of partial differential equations and solution by exact methods\methods of separation of variables
CO4	Explain the applications of infinite series and obtain series solution of ordinary differential equations.
CO5	Apply the knowledge of numerical methods in the modelling of various physical and engineering phenomena
Course Code	**18PHY22**
Course Name	**Engineering Physics**
CO1	Understand various types of oscillations and their implications, the role of Shock waves in various fields and Recognize the elastic properties of materials for engineering applications
CO2	Realize the interrelation between time varying electric field and magnetic field, the transverse nature of the EM waves and their role in optical fiber communication.
CO3	Compute Eigen values, Eigen functions, momentum of Atomic and subatomic particles using Time independent 1-D Schrodinger's wave equation
CO4	Apprehend theoretical background of laser, construction and working of different types of laser and its applications in different fields
CO5	Understand various electrical and thermal properties of materials like conductors, semiconductors and dielectrics using different theoretical models.
Course Code	**18EC43**
Course Name	**Control Systems**
CO1	Develop the mathematical and State model of electrical and mechanical systems.
CO2	Develop transfer function for a given control system using Block diagram reduction method and Signal Flow Graph Method.
CO3	Determine the time domain specifications for first and second order systems.
CO4	Determine the stability of the system in the time domain using Routh-Hurwitz Criterion and Root locus Technique.
CO5	Determine the stability of the system in the frequency domain using Nyquist and Bode plots.
Course Code	**18ELE23**
Course Name	**Basic Electrical Engineering**
CO1	Understand different laws, rules involved to solve basic electrical DC circuits and fundamentals of A.C
CO2	Analyze the behavior of Single phase AC circuits and Explain the concepts on three phase AC circuits.
CO3	Understand the need and working principle of transformers and understand the working principle of different wiring systems, earthing, and circuit breakers.
CO4	Understand the concepts of DC generator and DC motor.
CO5	Understand the concepts of Three phase synchronous generators and Induction motors.
Course Code	**18CIV24**
Course Name	**Elements of Civil Engineering and Mechanics**
CO1	Mention the applications of various fields of Civil Engineering.
CO2	Compute the resultant of a given force system subjected to various loads.

CO3	Comprehend the action of forces, moments and other loads on systems of rigid bodies and compute the reactive forces that develop as a result of the external loads.
CO4	Locate the centroid and compute the moment of inertia of regular and built up sections.
CO5	Express the relationship between the motion of bodies and analyze the bodies in motion.
Course Code	18EGDL25
Course Name	Engineering Graphics
CO1	Students will be able to demonstrate the usage of CAD software.
CO2	Students will be able to visualize and draw orthographic projection of points and lines.
CO3	Students will be able to visualize and draw orthographic projection of planes.
CO4	Students will be able to visualize and draw orthographic projection of Solids and Sections and Development of Lateral Surfaces of Solids.
CO5	Develop isometric drawings of simple objects reading the orthographic projections of those objects.
Course Code	18PHYL26
Course Name	Physics Laboratory
CO1	Apprehend the concepts of interference of light, diffraction of light, Fermi energy and magnetic effect of current
CO2	Understand the principles of operations of optical fibers and semiconductor devices such as Photodiode, and NPN transistor using simple circuits
CO3	Determine elastic moduli and moment of inertia of given materials with the help of suggested procedures
CO4	Recognize the resonance concept and its practical applications. To study the oscillations and charging and discharging curve of RC circuits.
Course Code	18ELEL27
Course Name	Basic Electrical Engineering Laboratory
CO1	Determine voltage and current using KVL and KCL and understand the concept of open and short circuit
CO2	Compare power factor of lamps
CO3	Determine impedance of an electrical circuit and power consumed in a three phase load
CO4	Determine earth resistance and understand two way and three way control of lamps.
CO5	Identify the common electrical components used for safety and understand the difference between AC and DC supply. Also understand the construction of DC Machines
Course Code	18EGH28
Course Name	Technical English-II
CO1	Identify common errors in spoken and written communication.
CO2	Get familiarized with English vocabulary and language proficiency.
CO3	Improve nature and style of sensible writing and acquire employment and workplace communication skill.
CO4	Improve their Technical Communication Skills through Technical Reading and Writing practices.
CO5	Perform well in campus recruitment, engineering and all other general competitive examinations.

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Course Outcome Statements of 2021 Scheme

The below table represents the 2021 Scheme Course Outcome Statements of the courses offered from 1st semester to 2nd semester of Basic Science.

1st Semester

Course Name	CALCULUS AND DIFFERENTIAL EQUATIONS
Course Code	21MAT11
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Apply the knowledge of calculus to solve problems related to polar curves and its applications in determining the bentness of a curve.
CO2	Apply the notion of partial differentiation to calculate rates of change of multivariate functions and solve problems related to composite functions and Jacobians.
CO3	Solve first-order linear/nonlinear differential equations analytically using standard methods.
CO4	Develop various physical models through higher-order differential equations and solve such linear ordinary differential equations.
CO5	Test the consistency of a system of linear equations and to solve them by direct and iterative methods.

Course Name	ENGINEERING PHYSICS
Course Code	21PHY12
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Interpret the types of mechanical vibrations and their applications, the role of Shock waves in various fields.
CO2	Demonstrate the quantisation of energy for microscopic system.
CO3	Apply LASER and Optical fibers in opto electronic system.
CO4	Illustrate merits of quantum free electron theory and applications of Hall effect.
CO5	Analyse the importance of XRD and Electron Microscopy in Nano material characterization.

Course Name	BASIC ELECTRICAL ENGINEERING
Course Code	21ELE13
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Apply mathematical knowledge and basic concepts of Ohm's law, Kirchhoff's laws and Vectors to solve simple DC and AC electric circuits
CO2	Apply mathematical knowledge and basic concepts of complex numbers to solve simple Single-phase AC and Three-phase AC circuits
CO3	Explain the working principles of transformers and DC machines
CO4	Explain the working principles of Alternators and Induction Motors
CO5	Explain the concepts of electric power transmission and distribution of power, electricity billing, working principles of circuit protective devices and personal safety measures

Course Name	ELEMENTS OF CIVIL ENGINEERING AND MECHANICS
Course Code	21CIV14
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Understand the various fields of civil engineering.
CO2	Compute the resultant of a force system and resolution of a force.

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CO3	Comprehend the action for forces, moments and other types of loads on rigid bodies and compute the reactive forces.
CO4	Locate the centroid and compute the moment of inertia of regular and built up sections.
CO5	Analyse the bodies in motion

| Course Name | ENGINEERING VISUALIZATION |
| Course Code | 21EVNL15 |

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Prepare and understand engineering drawings.
CO2	Identify and apply the principles of orthographic projections of lines, planes and solids.
CO3	Identify and apply the principles of orthographic projections and prepare development of lateral surfaces.
CO4	Visualize three dimensional objects and develop isometric projections.
CO5	Visualize engineering components.

| Course Name | ENGINEERING PHYSICS LABORATORY |
| Course Code | 21PHYL16 |

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Apprehend the concepts of, diffraction of light, Fermi energy and magnetic effect of current
CO2	Understand the principles of operations of optical fibers ,semiconductor device – Photodiode and to verify Stefan's Law using simple circuits
CO3	Determine elastic modulus and moment of inertia of given materials with the help of suggested procedures
CO4	Recognize the resonance concept and its practical applications. To study the oscillations and charging and discharging curve of RC circuits.

| Course Name | BASIC ELECTRICAL ENGINEERING LABORATORY |
| Course Code | 21ELE 17 |

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Verify KCL & KVL, Maximum Power Transfer Theorem and effects of open and short circuits in DC circuits.
CO2	Compare power factors of different types of lamps and determination of parameters of Choke coil.
CO3	Demonstrate the measurement of the impedance of an electrical circuit and power consumed by a 3-phase load and determination of efficiency of single phase transformer
CO4	Analyze two-way and three-way control of lamps and interpret the suitability of earth resistance measured
CO5	Implement the given problem statement using software simulation and experimental analysis

| Course Name | COMMUNICATIVE ENGLISH |
| Course Code | 21EGH18 |

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Understand and apply the fundamentals of communication skills in their communication skills
CO2	Identify the fundamentals of phonetics ,intonation and 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

| Course Name | INNOVATION AND DESIGN |

	THINKING
Course Code	21IDT19

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Explain theory and practice in design thinking
CO2	Apply various design thinking tools for problem solving
CO3	Explain Design thinking in IT industry
CO4	Explain application of design thinking techniques for strategic innovations
CO5	Develop and present design ideas through different design thinking techniques

Course Name	ENGINEERING CHEMISTRY
Course Code	21CHE12

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Discuss the electrochemical energy systems such as electrodes and batteries
CO2	Explain the fundamental concepts of corrosion, its control, surface modification techniques such as electroplating and electroless plating
CO3	Enumerate the importance, synthesis, applications of polymers. Understan properties and applications of nanomaterials
CO4	Describe the principles of green chemistry, unerstand the properties and applications of alternative fuels
CO5	Illustrate the fundamental principles of water chemistry,applicatons of volumetric and instrumetnal analysis

Course Name	PROBLEM SOLVING THROUGH PROGRAMMING
Course Code	21PSP13

Course Outcomes(Cos): At the end of the course the student will be able to :

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.

Course Name	BASIC ELECTRONICS AND COMMUNICATION ENGINEERING
Course Code	21ELN14

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Describe the concepts of Analog electronic circuits encompassing power supplies, amplifiers and oscillators
CO2	Identify the necessary digital blocks required to build the Microcontroller architecture and understand the working of each block.
CO3	Discuss the characteristics and technological advances of embedded systems.
CO4	Compare and contrast analog and digital communication systems.
CO5	Understand the various wireless network topologies and advancements in the communication system.

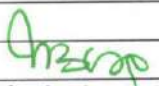| **Course Name**	ELEMENTS OF MECHANICAL

	ENGINEERING
Course Code	21EME15
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Acquire a basic understanding role of mechanical engineering in the industry and society and renewable energy sources
CO2	Acquire a basic understanding of the hydraulic turbines, formation of steam and its industrial application
CO3	Acquire knowledge of various engineering materials and metal joining techniques, heat transfer devices, automobile technology, refrigeration and air conditioning
CO4	Acquire knowledge on automobile technology, refrigeration and air conditioning
CO5	Acquire essential experience on basic power transmission systems, basic concepts on manufacturing principles and machine tools and their advancement

Course Name	ENGINEERING CHEMISTRY LABORATORY
Course Code	21CHEL16
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Determine the PKa and coefficient of viscosity of a given organic liquid
CO2	Estimate the amount of substance present in the given solution using potentiometric, colorimetric and conductometric method
CO3	Determine the total hardness and chemical oxygen demand in the given solution by volumetric analysis method
CO4	Estimate the percentage of Nickel, Copper and Iron in the given solution by titration method and demostrate the synthesis of nanomaterials by precipitation method and flame phtotmetric method

Course Name	COMPUTER PROGRAMMING LABORATORY
Course Code	21CPL17
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Make use of C compiler, IDE for programming, identify and correct the syntax and syntactic errors in programming.
CO2	Able to design and development of C problem solving skills.

Course Name	COMMUNICATIVE ENGLISH
Course Code	21EGH18
Course Outcomes(Cos): At the end of the course the student will be able to :	
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 useall types of English vocabulary and language proficiency.
CO5	Adopt theTechniques of Information Transfer through presentation.

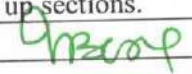| Course Name	SCIENTIFIC FOUNDATIONS OF HEALTH
Course Code	21SFH19
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Understand the basics about health and life style
CO2	Understand the nutritional requirements
CO3	Able to understand about the importance of mental health
CO4	Acquire the knowledge about chronic disease and their prevention

2nd Semester

Course Name	ADVANCED CALCULUS AND NUMERICAL METHOD
Course Code	21MAT21

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	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
CO2	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.
CO3	Formulate physical problems to partial differential equations and to obtain solution for standard practical PDE's.
CO4	Apply the knowledge of numerical methods in modeling of various physical and engineering phenomena.
CO5	Solve first order ordinary differential equations arising in engineering problems.

Course Name	ENGINEERING PHYSICS
Course Code	21PHY22

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Interpret the types of mechanical vibrations and their applications, the role of Shock waves in various fields.
CO2	Demonstrate the quantisation of energy for microscopic system.
CO3	Apply LASER and Optical fibers in opto electronic system.
CO4	Illustrate merits of quantum free electron theory and applications of Hall effect.
CO5	Analyse the importance of XRD and Electron Microscopy in Nano material characterization.

Course Name	BASIC ELECTRICAL ENGINEERING
Course Code	21ELE23

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Apply mathematical knowledge and basic concepts of Ohm's law, Kirchhoff's laws and Vectors to solve simple DC and AC electric circuits
CO2	Apply mathematical knowledge and basic concepts of complex numbers to solve simple Single-phase AC and Three-phase AC circuits
CO3	Explain the working principles of transformers and DC machines
CO4	Explain the working principles of Alternators and Induction Motors
CO5	Explain the concepts of electric power transmission and distribution of power, electricity billing, working principles of circuit protective devices and personal safety measures

Course Name	ELEMENTS OF CIVIL ENGINEERING AND MECHANICS
Course Code	21CIV24

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Understand the various fields of civil engineering.
CO2	Compute the resultant of a force system and resolution of a force.
CO3	Comprehend the action for forces, moments and other types of loads on rigid bodies and compute the reactive forces.
CO4	Locate the centroid and compute the moment of inertia of regular and built up sections.
CO5	Analyse the bodies in motion

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Course Name	ENGINEERING VISUALIZATION
Course Code	21EVNL25

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Prepare and understand engineering drawings.
CO2	Identify and apply the principles of orthographic projections of lines, planes and solids.
CO3	Identify and apply the principles of orthographic projections and prepare development of lateral surfaces.
CO4	Visualize three dimensional objects and develop isometric projections.
CO5	Visualize engineering components.

Course Name	ENGINEERING PHYSICS LABORATORY
Course Code	21PHYL26

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Apprehend the concepts of, diffraction of light, Fermi energy and magnetic effect of current
CO2	Understand the principles of operations of optical fibers ,semiconductor device – Photodiode and to verify Stefan's Law using simple circuits
CO3	Determine elastic modulus and moment of inertia of given materials with the help of suggested procedures
CO4	Recognize the resonance concept and its practical applications. To study the oscillations and charging and discharging curve of RC circuits.

Course Name	BASIC ELECTRICAL ENGINEERING LABORATORY
Course Code	21ELE 17/27

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Verify KCL & KVL, Maximum Power Transfer Theorem and effects of open and short circuits in DC circuits.
CO2	Compare power factors of different types of lamps and determination of parameters of Choke coil.
CO3	Demonstrate the measurement of the impedance of an electrical circuit and power consumed by a 3-phase load and determination of efficiency of single phase transformer
CO4	Analyze two-way and three-way control of lamps and interpret the suitability of earth resistance measured.
CO5	Implement the given problem statement using software simulation and experimental analysis.

Course Name	COMMUNICATIVE ENGLISH
Course Code	21EGH28

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Understand and apply the fundamentals of communication skills in their communication skills
CO2	Identify the fundamentals of phonetics ,intonation and 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

Course Name	INNOVATION AND DESIGN THINKING
Course Code	21IDT29

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Explain theory and practice in design thinking
CO2	Apply various design thinking tools for problem solving

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CO3	Explain Design thinking in IT industry
CO4	Explain application of design thinking techniques for strategic innovations
CO5	Develop and present design ideas through different design thinking techniques

Course Name	ENGINEERING CHEMISTRY
Course Code	21CHE22
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Discuss the electrochemical energy systems such as electrodes and batteries
CO2	Explain the fundamental concepts of corrosion, its control, surface modification techniques such as electroplating and electroless plating
CO3	Enumerate the importance, synthesis, applications of polymers. Understan properties and applications of nanomaterials
CO4	Describe the principles of green chemistry, unerstand the properties and applications of alternative fuels
CO5	Illustrate the fundamental principles of water chemistry,applicatons of volumetric and instrumetnal analysis

Course Name	PROBLEM SOLVING THROUGH PROGRAMMING
Course Code	21PSP23
Course Outcomes(Cos): At the end of the course the student will be able to :	
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.

Course Name	BASIC ELECTRONICS AND COMMUNICATION ENGINEERING
Course Code	21ELN24
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Describe the concepts of Analog electronic circuits encompassing power supplies, amplifiers and oscillators
CO2	Identify the necessary digital blocks required to build the Microcontroller architecture and understand the working of each block.
CO3	Discuss the characteristics and technological advances of embedded systems.
CO4	Compare and contrast analog and digital communication systems.
CO5	Understand the various wireless network topologies and advancements in the communication system.

Course Name	ELEMENTS OF MECHANICAL ENGINEERING
Course Code	21EME25
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Acquire a basic understanding role of mechanical engineering in the industry and society and renewable energy sources
CO2	Acquire a basic understanding of the hydraulic turbines, formation of steam and its industrial

	application
CO3	Acquire knowledge of various engineering materials and metal joining techniques, heat transfer devices, automobile technology, refrigeration and air conditioning
CO4	Acquire knowledge on automobile technology, refrigeration and air conditioning
CO5	Acquire essential experience on basic power transmission systems, basic concepts on manufacturing principles and machine tools and their advancement

Course Name	ENGINEERING CHEMISTRY LABORATORY
Course Code	21CHEL26
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Determine the PKa and coefficient of viscosity of a given organic liquid
CO2	Estimate the amount of substance present in the given solution using potentiometric, colorimetric and conductometric method
CO3	Determine the total hardness and chemical oxygen demand in the given solution by volumetric analysis method
CO4	Estimate the percentage of Nickel, Copper and Iron in the given solution by titration method and demostrate the synthesis of nanomaterials by precipitation method and flame phtotmetric method

Course Name	COMPUTER PROGRAMMING LABORATORY
Course Code	21CPL27
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Make use of C compiler, IDE for programming, identify and correct the syntax and syntactic errors in programming.
CO2	Able to design and development of C problem solving skills.

Course Name	COMMUNICATIVE ENGLISH
Course Code	21EGH28
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Understand and apply the fundamentals of communication skills in their communication skills
CO2	Identify the fundamentals of phonetics ,intonation and 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

Course Name	SCIENTIFIC FOUNDATIONS OF HEALTH
Course Code	21SFH29
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Understand the basics about health and life style
CO2	Understand the nutritional requirements
CO3	Able to understand about the importance of mental health
CO4	Acquire the knowledge about chronic disease and their prevention

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Course Outcome Statements of 2022 Scheme

The below table represents the 2022 Scheme Course Outcome Statements of the courses offered from 1st semester to 2nd semester of Basic Science.

1st Semester

Course Name	Mathematics for CSE stream-I
Course Code	BMATS101
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Apply the knowledge of calculus to solve problems related to polar curves
CO2	Apply the notion of partial differentiation to compute rates of change of multivariate functions and solve problems related to composite functions and Jacobians.
CO3	Solve first-order linear/nonlinear differential equations analytically using standard methods.
CO4	Apply modular arithmetic to computer algorithms.
CO5	Test the consistency of a system of linear equations and using matrix theory to solve system of linear equations and compute Eigen values and Eigen vectors.
CO6	Familiarize with the modern mathematical tool namely PYTHON

Course Name	Introduction to Mechanical Engineering
Course Code	22ESC144
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Explain the concepts of Role of Mechanical Engineering and Energy sources.
CO2	Describe the Machine Tool Operations and advanced Manufacturing process.
CO3	Explain the Working Principle of IC engines and EV vehicles.
CO4	Discuss the Properties of Common Engineering Materials and various Metal Joining Processes.
CO5	Explain the Concepts of Mechatronics, Robotics and Automation in IoT

Course Name	Innovation and Design Thinking
Course Code	BIDTK158/258
Course Outcomes(Cos): At the end of the course the student will be able to :	
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

Course Name	Indian Constitution
Course Code	22ICO17 / 27
Course Outcomes(Cos): At the end of the course the student will be able to :	
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.

Course Name	Balake Kannada
Course Code	22KBK17

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Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	To understand the necessity of learning of local langauage for comfortabe elife
CO2	To speak,read and write Kannada langauage as per requirement
CO3	To communicate (converse) in Kannada language in their daily life with kannada speakers
CO4	To listen and understand the Kannada language properly
CO5	To speak in polite conversation

Course Name	Computer Aided Engineering Drawing
Course Code	BCEDK103

Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Prepare and understand engineering drawings.
CO2	Identify and apply the principles of orthographic projections of lines, planes and solids.
CO3	Identify and apply the principles of orthographic projections and prepare development of lateral surfaces.
CO4	Visualize three dimensional objects and develop isometric projections.
CO5	Visualize engineering components.

Course Name	Introduction to Web Programming
Course Code	BPLCK105A

Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	To use the syntax and semantics of HTML and XHTML
CO2	To use the syntax and semantics of HTML5
CO3	To create and apply CSS styling to a webpage
CO4	To understand how CSS can enhance the design of a webpage and to develop different parts of a web page
CO5	To get familiarity with the JavaScript language and understand Document Object Model handling of Java Script

Course Name	Scientific Foundation of Health
Course Code	BSFHK158

Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	To understand the importance of physical, mental and emotional wellbeing
CO2	To understand the importance of healthy eating habits
CO3	To create the healthy and caring relationship
CO4	To adopt the innovative & positive methods to avoid risks from harmful habits in their campus & outside the campus
CO5	To positively fight against harmful diseases for good health through positive mindset.

Course Name	Communicative English
Course Code	BENGK106

Course Outcomes(Cos): At the end of the course the student will be able to :	
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.

Course Name	Mathematics for ECE stream-I
Course Code	BMATE101

Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Apply the knowledge of calculus to solve problems related to polar curves
CO2	Apply the notion of partial differentiation to compute rates of change of multivariate functions and solve problems related to composite functions and Jacobians.
CO3	Solve first-order linear/nonlinear differential equations analytically using standard methods.
CO4	Apply the concept of change of order of integration and variables to evaluate multiple integrals and their usage in computing area and volume
CO5	Test the consistency of a system of linear equations and using matrix theory to solve system of linear equations and compute Eigen values and Eigen vectors.
CO6	Familiarize with the modern mathematical tool namely PYTHON

Course Name	Applied Physics for CSE Stream
Course Code	BPHYS102

Course Outcomes(Cos): At the end of the course the student will be able to :	
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.

Course Name	Applied Chemistry for Civil Engineering stream
Course Code	BCHEC102

Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Identify the terms andapplications processes involved in scientific and engineering
CO2	Explain the phenomena of chemistry to describe the method sof engineering processes
CO3	Solve for 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

Course Name	Mathematics for ME stream-I
Course Code	BMATM101

Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Apply the knowledge of calculus to solve problems related to polar curves.
CO2	Apply the notion of partial differentiation to compute rates of change of multivariate functions and solve problems related to composite functions and Jacobians.
CO3	Solve first-order linear/nonlinear differential equations analytically using standard methods.
CO4	Solve higher order linear differential equations and nonlinear differential equations analytically using standard methods.
CO5	Test the consistency of a system of linear equations and using matrix theory to solve system of linear equations and compute Eigen values and Eigen vectors.
CO6	Familiarize with the modern mathematical tool namely PYTHON.

Course Name	Mathematics for CVE stream-I
Course Code	BMATC101

Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Apply the knowledge of calculus to solve problems related to polar curves.

CO2	Apply the notion of partial differentiation to compute rates of change of multivariate functions and solve problems related to composite functions and Jacobians.
CO3	Solve first-order linear/nonlinear differential equations analytically using standard methods.
CO4	Solve higher order linear differential equations and nonlinear differential equations analytically using standard methods.
CO5	Test the consistency of a system of linear equations and using matrix theory to solve system of linear equations and compute Eigen values and Eigen vectors.
CO6	Familiarize with the modern mathematical tool namely PYTHON.

Course Name	Introduction to Electronics and Communication
Course Code	BESCK104C
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Describe the concepts of Analog electronic circuits encompassing power supplies and amplifiers
CO2	Discuss the various applications of Oscillator and Operational Amplifier
CO3	Discuss the different number systems and its conversion and working of fundamental building blocks of digital circuits.
CO4	Discuss the characteristics and technological advances of embedded systems
CO5	Explain analog and digital communication systems

Course Name	Introduction to Electrical Engineering
Course Code	BESCK104B
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Understand the concepts of various energy sources and Electric circuits
CO2	Apply mathematical knowledge and basic concepts of complex numbers to solve simple Single-phase AC and Three-phase AC circuits
CO3	Discuss the construction and operation of electrical DC machines
CO4	Explain the working principles of Transformers and three phase Induction Motors
CO5	Explain the concepts of domestic wiring, electricity billing, working principles of circuit protective devices and personal safety measures

Course Name	Introduction to Nano Technology
Course Code	BETCK105C
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Demonstrate the synthesis of nanoparticles by various techniques.
CO2	Explain working of basic instruments used in characterization of nanoparticles.
CO3	Exlain the propertes carbon nano materials and thier role in the filed of electronics, mechanical and civil domains
CO4	Explain the role of nanomateials in energy storage and conversion
CO5	Expalin the applications of Nano mateials in various fields

Course Name	Introduction to Python Programming
Course Code	BPLCK105B
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Illustrate Python syntax, semantics, flow control and functions.
CO2	Demonstrate proficiency in handling Strings and File Systems.
CO3	Design Python Programs using core data structures like Lists, Dictionaries
CO4	Interpret the concepts of Object-Oriented Programming as used in Python.

Course Name	Applied Chemistry for Computer Science &Engineering stream
Course Code	BCHES102

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Identify the terms andapplications processes involved in scientific and engineering
CO2	Explain the phenomena of chemistry to describe the methods of engineering processes
CO3	Solve the problems in chemistry that are pertinenting engineering applications
CO4	Apply the basic concepts of chemistry to explain the chemical properties and proc
CO5	Analyze properties and multidisciplinary situations processes associated with chemical substances in multidisciplinary situations

Course Name	Chemistry for Electrical and Electronics Engineering stream
Course Code	BCHEE102

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Identify the terms and applications processes involved in scientific and engineering
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 multi disciplinary situations processes associated with chemical substances

Course Name	Applied Chemistry for Mechanical Engineering stream
Course Code	BCHEM102

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Identify the terms and applications processes involved in scientific and engineering
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 and multidisciplinary situations

2nd Semester

Course Name	Introduction to Nanotechnology
Course Code	BETCKC205

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Demonstrate the synthesis of nanoparticles by various techniques.
CO2	Explain working of basic instruments used in characterization of nanoparticles.
CO3	Explain the properties carbon nano materials and their role in the field of electronics, mechanical and civil domains
CO4	Explain the role of nanomaterials in energy storage and conversion
CO5	Explain the applications of Nano materials in various fields

Course Name	Introduction to Electrical Engineering
Course Code	BESCK204B

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Understand the concepts of various energy sources and Electric circuits
CO2	Apply mathematical knowledge and basic concepts of complex numbers to solve simple Single-

	phase AC and Three-phase AC circuits
CO3	Discuss the construction and operation of electrical DC machines
CO4	Explain the working principles of Transformers and three phase Induction Motors
CO5	Explain the concepts of domestic wiring, electricity billing, working principles of circuit protective devices and personal safety measures

Course Name	Basic Electronics
Course Code	BBEE103/203
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Develop the basic knowledge on construction, operation and characteristics of semiconductor devices.
CO2	Apply the acquired knowledge to construct small scale circuits consisting of semiconductor devices
CO3	Develop competence knowledge to construct basic digital circuits by making use of the basic gate and its function.
CO4	Discuss the various applications of Oscillator and Operational Amplifier
CO5	Apply the knowledge of various transducers principles in sensor systems and communication system

Course Name	Computer Aided Engineering Drawing
Course Code	BCEDK203
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Prepare and understand engineering drawings.
CO2	Identify and apply the principles of orthographic projections of lines, planes and solids.
CO3	Identify and apply the principles of orthographic projections and prepare development of lateral surfaces.
CO4	Visualize three dimensional objects and develop isometric projections.
CO5	Visualize engineering components.

Course Name	Scientific Foundation of Health
Course Code	BSFHK258
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	To understand the importance of physical, mental and emotional wellbeing
CO2	To understand the importance of healthy eating habits, healthy and caring relationship
CO3	To adopt innovative and positive methods to avoid risks from harmful habits and to know how to positively fight against harmful diseases for good health through a positive mindset

Course Name	Balake Kannada
Course Code	22KBK27
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	To understand the necessity of learning of local langauage for comfortabe elife
CO2	To speak,read and write Kannada langauage as per requirement
CO3	To communicate (converse) in Kannada language in their daily life with kannada speakers
CO4	To listen and understand the Kannada language properly
CO5	To speak in polite conversation

Course Name	Indian Constitution
Course Code	BICOK207
Course Outcomes(Cos): At the end of the course the student will be able to :	

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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.

Course Name	Mathematics-II for Electrical and Electronics Engineering Stream
Course Code	BMATE201

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Understand the applications of vector calculus refer to solenoidal,irrotational vectors,line integral and surface integral.
CO2	Demonstrate the idea of linear dependence and independece of sets in the vector space
CO3	To understand the concept of Laplace transform and to solve initial value problems.
CO4	Apply the knowledge of numerical methods in solving physical and engineering phenomena.
CO5	Solve ordinary differential equations of first order numerically arising in engineering problems.
CO6	Get familiarize with modern mathematical tools namely Python.

Course Name	Principles of Programming using C
Course Code	BPOPS203

Course Outcomes(Cos): At the end of the course the student will be able to :

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 function

Course Name	: Introduction to C Programming
Course Code	BESCK204E

Course Outcomes(Cos): At the end of the course the student will be able to :

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 and pointers in implementing solutions
CO5	Design and Develop Solutions to problems using modular programming constructs using functions

Course Name	Renewable Energy
Course Code	BETCK205E

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Describe the environmental aspects of renewable energy resources in Comparison with various conventional energy systems, their prospects and limitations.
CO2	Describe the use of solar energy and the various components used in the energy production with

	respect to applications like-heating, cooling, desalination, power generation.
CO3	Understand the conversion principles of wind and tidal energy
CO4	Understand the concept of biomass energy resources and green energy.
CO5	Acquire the basic knowledge of ocean thermal energy conversion and hydrogen energy.

Course Name	Professional writing skills
Course Code	BPWSK206
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	To Identify the Common Errors in Writing and Speaking of English. .
CO2	To Achieve better Technical writing and Presentation skills for employment
CO3	To read Technical proposals properly and make them to Write good technical reports
CO4	Acquire Employment and Workplace communication skills

Course Name	Elements of Mechanical Engineering
Course Code	BEMEM203
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Explain the role of mechanical engineering in industry and society, fundamentals of steam and non-conventional energy sources
CO2	Describe different conventional and advanced machining processes, IC engines, air-conditioning, refrigeration.
CO3	Explain different gear drives, gear trains, belt drives, and joining processes.
CO4	Explain the aspects of future mobility and fundamentals of robotics

Course Name	Applied Physics for ME stream
Course Code	BPHYM202
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Elucidate the concepts in oscillations, waves, elasticity and material failures
CO2	Discuss the fundamentals of Thermoelectric materials and their application
CO3	Summarize the low temperature phenomena and generation of low temperature
CO4	Explain the various material characterization techniques
CO5	Practice working in groups to conduct experiments in physics and perform precise and honest measurements.

Course Name	Applied Physics for CSE stream
Course Code	BPHYS202
Course Outcomes(Cos): At the end of the course the student will be able to :	
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.

Course Name	Applied physics for civil stream
Course Code	BPHYC202
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	To understand the types of oscillation, shock waves and it's generation and applications.
CO2	To study the elastic properties of materials and failures of engineering materials.
CO3	To study the acoustics buildings and the essentials of radiometry and photometry.

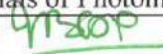| CO4 | To understand the principle of photonic devices and their application relevant to civil engineering. |
| CO5 | To understand the various natural disaster and safety. |

Course Name	Introduction to Python Programming
Course Code	BPLCKB205
Course Outcomes(Cos): At the end of the course the student will be able to :	
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 writing files.
CO4	Students will gain the competency to organizing files and demonstrate the use of built-in functions to navigate the file system.
CO5	Interpret the concepts of Object-Oriented Programming as used in Python

Course Name	Mathematics – II for ME stream
Course Code	BMATM201
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Apply the knowledge of multiple integrals to compute area and volume.
CO2	Understand the applications of vector calculus refer to solenoidal, irrotational vectors, line integral and surface integral.
CO3	Demonstrate partial differential equations and their solutions for physical interpretations.
CO4	Apply the knowledge of numerical methods in solving physical and engineering phenomena.
CO5	Solve ordinary differential equations of first order numerically arising in engineering problems.

Course Name	Mathematics – II for CVE stream
Course Code	BMATC201
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Apply the knowledge of multiple integrals to compute area and volume.
CO2	Understand the applications of vector calculus refer to solenoidal, irrotational vectors, line integral and surface integral.
CO3	Demonstrate partial differential equations and their solutions for physical interpretations.
CO4	Apply the knowledge of numerical methods in solving physical and engineering phenomena.
CO5	Solve ordinary differential equations of first order numerically arising in engineering problems.

Course Name	Applied Chemistry for Computer Science &Engineering stream
Course Code	BCHES202
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Identify the terms andapplications processes involved in scientific and engineering
CO2	Explain the phenomena of chemistry to describe the methods of engineering processes
CO3	Solve the problems in chemistry that are pertinenting 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 multidisciplinary situations

Course Name	Applied physics for EEE stream
Course Code	BPHYE202
Course Outcomes(Cos): At the end of the course the student will be able to :	
CO1	Describe the fundamental principles of the Quantum Mechanics and the essentials of Photonics.

CO2	Elucidate the concepts of conductors, dielectrics and superconductivity.
CO3	Discuss the fundamentals of vector calculus and their applications in Maxwell's Equations and EM Waves.
CO4	Summarize the properties of semiconductors and the working principles of semiconductor devices
CO5	Practice working in groups to conduct experiments in physics and Perform precise and honest measurements.

| Course Name | Innovation and Design Thinking |
| Course Code | BIDTK258 |

Course Outcomes(Cos): At the end of the course the student will be able to :

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	Identify the significance of reverse Engineering to Understand products

| Course Name | Mathematics-II for Computer Science and Engineering Stream |
| Course Code | BMATS201 |

Course Outcomes(Cos): At the end of the course the student will be able to :

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, irrotational vectors, transformation between cartesian and curvilinear systems, orthogonality.
CO3	Demonstrate the idea of linear dependence and independece of sets in the vector space
CO4	Apply the knowledge of numerical methods in solving physical and engineering phenomena.
CO5	Solve ordinary differential equations of first order numerically arising in engineering problems.
CO6	Get familiarize with modern mathematical tools namely Python.

| Course Name | Introduction to Electronics & Communication |
| Course Code | BESCK104C/204C |

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Describe the concepts of Analog electronic circuits encompassing power supplies and amplifiers
CO2	Discuss the various applications of Oscillator and Operational Amplifier
CO3	Discuss the different number systems and its conversion and working of fundamental building blocks of digital circuits.
CO4	Discuss the characteristics and technological advances of embedded systems
CO5	Explain analog and digital communication systems.

| Course Name | Engineering Mechanics |
| Course Code | BCIVC203 |

Course Outcomes(Cos): At the end of the course the student will be able to :

CO1	Compute the resultant of a force system and resolution of a force
CO2	Comprehend the action for forces, moments, and other types of loads on rigid bodies and compute the reactive forces
CO3	Analyse the frictional resistance offered by different planes
CO4	Locate the centroid and compute the moment of inertia of sections
CO5	Analyze the bodies in motion