DEPARTMENT OF ELECTRONIC AND COMPUTER ENGINEERING

Code of subject	Name of subject	CO No.	Course Outcomes
BTES301	Engineering Mathematics – III	1	Students Able To Apply The Concepts And Properties Of Laplace Transformation
		2	Students Able To Apply The Concepts Of Inverse Laplace Transform With Its Property To Solve Linear Differential Equation With Given Initial Conditions.
		3	Students Able To Find Fourier Transform Of Given Function By Using Properties And Identities
		4	Students Able To Solve Various Partial Differential Equations Such As One And Two Dimensional Heat Flow Equations With Appropriate Way.
		5	Students Able To Construct Required Analytic Function And Evaluate Contour Integral Using Residue And Cauchy's Integral Theorem
BTECPC302	Electronics Devices and Circuits	1	Discuss Operation, Biasing And Applications Of Jfet & Mosfet.
		2	Comply And Verify Parameters After Exciting Devices By Any Stated Method.
		3	To Use Transistor As An Oscillator And Negative Feedback Amplifier
		4	Design Regulated Power Supply
		5	Select Appropriate Transducer For The Developing Electronic Circuit.
BTECPC303	Programming Data Structures & Algorithm Using C	1	Implement Linked List & Perform Various Operations On Linked List
		2	Implement Stack & Perform Operations On Stack.
		3	Implement Various Types Of Queues & Perform Operations On Stack.
		4	Implement Trees & Graph And Traverse To Solve A Problem.
		5	Implement An Algorithm & Apply Different Searching And Sorting Techniques.
BTESC304	Computer Architecture & Operating Systems	1	Get Acquaint With Computer Architecture And Cpu Building Blocks
		2	Understand Classify And Draw Schematic Diagrams Of Various Computer Memories
		3	Explain Operations Of Control Unit And Input Output Of A Typical Computer
		4	Define Operating System, Thread, Process, Inter-Process Communication And Solve Numerical Related To Various CPU Scheduling Algorithm
		5	Understand Concepts Of Process Synchronization And Deadlocks And Solve Associated Numerical

BTESC305	Digital Electronics and Microprocessor	1	Became Familiar With The Digital Signal, Positive And Negative Logic, Boolean Algebra, Logic Gates, Logical Variables, The Truth Table, Number Systems, Codes, And Their Conversion From Others
		2	Learn The Working Mechanism And Design Guidelines Of Different Combinational Circuits And Their Role In Digital System Design.
		3	Understand The Working Mechanism And Design Guidelines Of Different Sequential Circuits And Their Role In The Digital System Design
		4	Assess And Solve Basic Binary Math Operations Using The Microprocessor And Explain The Microprocessor's Internal Architecture And Its Operation Within The Area Of Manufacturing And Performance
		5	Describe, List And Use Different Types Of Instruction And Interrupts And Develop Assembly Language Programs Using Various Programming Tools
BTECPC401	Python Programming	1	Display Message On Screen Using Python Script On Ide.
		2	Write Python Program To Demonstrate Use Of Operators
		3	Perform Operations On Data Structures In Python
		4	Develop Functions, Modules, Packages For Given Problem.
		5	Design Classes For Given Problem, Handle Exceptions.
BTECPC402	Database Management System	1	Use The Basic Concepts Of Database Systems In Database Systems.
		2	Apply Sql Queries To Interact With Database.
		3	Apply Normalization On Database Design To Eliminate Anomalies
		4	Analyze Database Transactions And Control Them By Applying Acid Properties.
		5	Study Of Nosql Database And Orientation Using Mongodb
BTHM403	Basic Human Rights	1	To Train The Young Minds Facing The Challenges Of The Pluralistic Society And The Rising Conflicts And Tensions In The Name Of Particularistic Loyalties To Caste, Religion, Region And Culture
		2	To Give Knowledge Of The Major "Signposts" In The Historical Development Of Human Rights, The Range Of Contemporary Declarations, Conventions, And Covenants.
		3	To Enable Them To Understand The Basic Concepts Of Human Rights (Including Also Discrimination, Equality, Etc.), The Relationship Between Individual, Group, And National Rights.
		4	To Develop Sympathy In Their Minds For Those Who Are Denied Rights.
		5	To Make The Students Aware Of Their Rights As Well As Duties To The Nation

BTBS404	Probability Theory and Random Processes	1	Understand The Fundamental Knowledge Of The Concepts Of Probability And Have Knowledge Of Standard Distributions Which Can Describe Real Life Phenomenon
		2	Understand The Basic Concepts Of One And Two Dimensional Random Variables And Apply In Engineering Applications
		3	Apply The Concept Random Processes In Engineering Disciplines
		4	Understand And Apply The Concept Of Correlation And Spectral Densities
		5	The Students Will Have An Exposure Of Various Distribution Functions And Help In Acquiring Skills In Handling Situations Involving More Than One Variable. Able To Analyze The Response Of Random Inputs To Linear Time Invariant Systems
BTECPR405A	Microcontroller and Advanced Processor	1	Explain The Internal Organization Of Microprocessors & Microcontrollers And The General Structures Of Microcontrollers
		2	Understand Classify And Draw Schematic Diagrams Of Various Computer Memories
		3	Explain Operations Of Control Unit And Input Output Of A Typical Computer
		4	Define Operating System, Thread, Process, Inter-Process Communication And Solve Numerical Related To Various Cpu Scheduling Algorithm
		5	Understand Concepts Of Process Synchronization And Deadlocks And Solve Associated Numerical
BTETC501	Electronagnetics and FieldTheory	1	Learners Can Be Able To Explore Their Knowledge In The Area Of Em Waves And Its Analysis.
		2	To Learn Basic Coordinate System, Significance Of Divergence, Gradient, Curl And Its Applications To Em Waves.
		3	To Understand The Boundary Conditions For Different Materials/Surfaces.
		4	To Get Insight On Finding Solution For Non-Regular Geometrical Bodies Using Finite Element Method, Method Of Moments, Finite Difference Time Domain.
		5	To Get The Basics Of Microwave, Transmission Lines And Antenna Parameters.
BTETC502	Digital Signal Processing	1	1. Understand Use Of Different Transforms And Analyze The Discrete Time Signals And Systems.
		2	2. Realize The Use Of Lti Filters For Filtering Different Real-World Signals.
		3	3. Capable Of Calibrating And Resolving Different Frequencies Existing In Any Signal.
		4	4. Design And Implement Multistage Sampling Rate Converter.
		5	5. Design Of Different Types Of Digital Filters For Various Applications.
BTETC503	Analog Communication	1	Understand And Identify The Fundamental Concepts And Various Components Of Analog Communication Systems.

		2	Understand The Concepts Of Modulation And Demodulation techniques.
		3	Design Circuits To Generate Modulated And Demodulated Wave
		4	Equip Students With Various Issues Related To Analog Communication Such As Modulation, Demodulation, Transmitters And Receivers And Noise performance.
		5	Understand The Concepts Of Modulation And Demodulation Techniques Of Angle Modulation (Frequency And Phase).
		6	Explain Signal To Noise Ratio, Noise Figure And Noise Temperature For Single And Cascaded Stages In A Communication System.
		7	Develop The Ability To Compare And Contrast The Strengths And Weaknesses Of Various Communication Systems.
BTETPE504A	Analog Circuits	1	Understand The Characteristics Of Ic And Op-Amp And Identify The Internal Structure.
		2	Understand And Identify Various Manufacturing Techniques.
		3	Derive And Determine Various Performances-Based Parameters And Their Significance For Op-Amp
		4	Verify Parameters After Exciting Ic By Any Stated Method.
		5	Analyze And Identify The Closed Loop Stability Considerations And I/O Limitations.
		6	Analyze And Identify Linear And Nonlinear Applications Of Op-Amp.
		7	Understand And Verify Results (Levels Of V & I) With Hardware Implementation.
		8	Implement Hardwired Circuit To Test Performance And Application For What It Is Being Designed.
BTETPE505A	Control System Engineering	1	To Introduce The Elements Of Control System And Their Modeling Using Various Techniques.
		2	To Introduce Methods For Analyzing The Time Response, The Frequency Response And The Stability Of Systems.
		3	To Introduce The Concept Of Root Locus, Bode Plots, Nyquist Plots.
		4	To Introduce The State Variable Analysis Method.
		5	To Introduce Concepts Of Pid Controllers And Digital And Control Systems.
		6	To Introduce Concepts Programmable Logic Controller.
BTECOE504C	Programming in Java Language.	1	Understand The Basic Principles Of Java Programming Language
		2	Apply The Concepts Of Classes And Objects To Write Programs In Java
		3	Demonstrate The Concepts Of Interfaces & Inheritance

Code	Subject	No.	Course Outcome
		4	Understand Multithreading And Exception Handling In Java To Develop Robust Programs
		5	Apply The Concepts Of Graphics And Jdbc For Project Development
BTETC601	Antenna & Wave Propagation	1	Formulate The Wave Equation And Solve It For Uniform Plane Wave.
		2	Analyze The Given Wire Antenna And Its Radiation Characteristics.
		3	Identify The Suitable Antenna For A Given Communication System.
BTETC602	Digital Communication	1	To Understand The Building Blocks Of Digital Communication System.
		2	To Prepare Mathematical Background For Communication Signal Analysis.
		3	To Understand And Analyze The Signal Flow In A Digital Communication System.
		4	To Analyze Error Performance Of A Digital Communication System In Presence Of Noise And Other Interferences.
		5	To Understand Concept Of Spread Spectrum Communication System.
BTETPE603A	Microprocessor and Microcontroller	1	Students Get Ability To Conduct Experiments Based On Interfacing Of Devices To Or Interfacing To Real World Applications
		2	Students Get Ability To Interface Mechanical System To Function In Multidisciplinary System Like In Robotics, Automobiles
		3	Students Can Identify And Formulate Control And Monitoring Systems Using Microprocessors
		4	Learn Use Of Hardware And Software Tools
		5	Develop Interfacing To Real World Devices
		6	Graduates Will Be Able To Design Real Time Controllers Using Microcontroller-Based System
		7	Learn Importance Of Microcontroller In Designing Embedded Application
BTETOC604C	Computer Network	1	To Master The Terminology And Concepts Of The Osi Reference Model And The Tcp-Ip Reference Model.
		2	2. To Master The Concepts Of Protocols, Network Interfaces, And Design/Performance Issues In Local Area Networks And Wide Area Networks.
		3	3. To Be Familiar With Wireless Networking Concepts.
		4	4. To Be Familiar With Contemporary Issues In Networking Technologies.
		5	5. To Be Familiar With Network Tools And Network Programming.
BTHM605		1	Have Skills And Preparedness For Aptitude Tests.
		2	Be Equipped With Essential Communication Skills (Writing, Verbal And Non-Verbal)

	Employability and Skills Development	3	Master The Presentation Skill And Be Ready For Facing Interviews.
		4	Build Team And Lead It For Problem Solving.
BTETC701	Digital Communication	1	To Understand The Building Blocks Of Digital Communication System.
		2	To Prepare Mathematical Background For Communication Signal Analysis.
		3	To Understand And Analyze The Signal Flow In A Digital Communication System.
		4	To Analyze Error Performance Of A Digital Communication System In Presence Of Noise And Other Interferences.
		5	To Understand Concept Of Spread Spectrum Communication System.
BTETPE702F	Mobile Computing	1	Discuss Various Terms Related To Mobile Computing
		2	Choose Mac Protocol Depending On Scheme Required
		3	Differentiate Mobile Ip & Tcp Ip
		4	Elaborate Various Ad-Hoc Networks And Their Use Cases
		5	Compare Various Operating Systems Used In Mobile Devices
BTETPE703A	Embedded System Design	1	To Understand The Embedded System Design Issues
		2	To Learn Real Time Operating System Concepts.
		3	To Learn Embedded Software Development And Testing Process
		4	To Demonstrate Design Interfacing Of The Systems With Other Data Handling / Processing Systems
BTETPE704A	Consumer Electronics	1	1. List Technical Specification Of Electronics Audio System (Microphone And Speaker)
		2	2. Trouble Shoots Consumer Electronics Products Like Tv, Washing Machine And Ac.
		3	3. Identify And Explain Working Of Various Color Tv Transmission Blocks.
		4	4. Adjust Various Controls Of Color Tv Receiver And Troubleshoot It.
		5	5. Use Various Functions Of Cam Coder And Shoot A Video And Take Snapshots And Save Them In Appropriate Format.
BTHM705	Financial Management	1	The Students Would Be Able To Understand And Define Basic Terminology Used In Finance And Accounts
		2	The Students Would Be Able To Prepare& Appraise Financial Statements And Evaluate A Company In The Light Of Different Measurement Systems.

		3	The Students Would Be Able To Analyze The Risk And Return Of Alternative Sources Of Financing.
		4	Estimate Cash Flows From A Project, Inc Luding Operating, Net Working Capital, And Capita L Spending.
		5	To Estimate The Required Return On Projects Of Differing Risk ,To Estimate The Cash Flows From An Investment Project, Calculate The Appropriate Discount Rate, Determine The Value Added From The Project, And Make A Recommendation To Accept Or Reject The Project
		6	To Describe And Illustrate The Important Elements In Project Finance Using Financial Calculator And Excel In A Variety Of Problems.
BTETPE802A	Introduction to Internet of Things	1	Understand The Concept Of Internet Of Things
		2	Understand Building Blocks Of Internet Of Things And Characteristics
		3	Implement Interfacing Of Various Sensors With Arduino/Raspberry Pi
		4	Demonstrate The Ability To Transmit Data Wirelessly Between Different Devices
		5	Understand The Application Areas Of Iot
BTETPE802D	Industrial Automation Control	1	To Understand The Working Of Electrical, Hydraulic, Pneumatic, Mechanical, Plc, Drives
		2	Identify Systems Approach Of The Process Control In Industry And State-Of-The-Art Coverage Of Computer Integrated Manufacturing Using Plcs And Flexible Manufacturing Systems As Applicable In Industrial Applications.
		3	Develop Skills In Handling The Different Controllers
		4	Develop The Plc Program For Given Application
		5	Learn And Apply Essential Concepts Behind Control System Elements And Operations In Hydraulics And Pneumatics Automation.