B.Tech (Robotics and Artificial Intelligence)	
1st SEMESTER	
Course Name: Semiconductor Physics (BTPH104-18)	
CO1	Apply the fundamental principles to study the properties of electronic materials
CO2	Outline the free electron theory and periodic potential for electronic material
CO3	Identify the properties and Behaviors of semiconductor
CO4	Explain the Principle of optoelectronics devices and its applications
CO5	Apply the fundamental principles to study the properties of electronic materials
Course Name: Semiconductor Physics Lab (BTPH114-18)	
CO1	Identify the physical principle involved in the various instruments.
CO2	Verify some of the theoretical concepts learnt in the theory courses.
CO3	Draw conclusions from data and develop skills in experimental design.
CO4	Summarize technical report which communicates scientific information in a clear and concise manner.
CO5	Demonstrate to the methods used for estimating and dealing with experimental uncertainties and systematic "errors."
Course Name: Maths -1 (BTPH104-18)	
CO1	Apply differential calculus for single variable functions.
CO2	Apply integral calculus for single variable functions and its applications.
CO3	Find the rank and inverse of matrices by elementary transformations.
CO4	Illustrate the concept of vector spaces & linear transformations of finite dimensional vector spaces.
CO5	Make use of matrices and linear algebra.
Course Name: Basic Electrical engineering (BTEE 101-18)	
CO1	Outline the basic concept of DC and AC Electrical circuits
CO2	Apply the fundamental principles of DC & AC electrical circuits to solve the problems related to electrical circuits
CO3	Interpret the physical components and working of transformer.
CO4	Demonstrate the working and constructional details of DC machines and Induction Motors.
CO5	Summarize the different electrical components ,wiring and earthing for electrical installations.
Course Name: Basic Electrical engineering Lab (BTEE 102-18)	
CO1	Identify the physical principle involved in the various instruments.
CO2	Verify some of the theoretical concepts learnt in the theory courses.
CO3	Draw conclusions from data and develop skills in experimental design.
CO4	Summarize technical report which communicates scientific information in a clear and concise manner.
CO5	Demonstrate to the methods used for estimating and dealing with experimental uncertainties and systematic "errors."

Course Name: Engineering Graphics & Design (BTME 101-21)	
CO1	Describe the principles of Engineering Graphics and its tools.
CO2	Draw orthographic projection and explain its concept.
CO3	To have the knowledge of generating the pictorial views.
CO4	Explain the solid projection techniques and surface development.
CO5	Use CAD Tools to draw 2d and 3D Models and generate printable drawing.

2nd SEMESTER	
Course Name: Chemistry-1 (BTCH101-18)	
CO1	State the periodic functions, theories and solutions of Quantum mechanics.
CO2	Explain spectroscopic techniques and behavior of metallurgical systems.
CO3	Explain the principles of intermolecular interactions and geometrical features of stereochemistry.
CO4	State the organic reactions, basic principles and the processes of thermodynamic system.
CO5	Illustrate the properties of water corrosion and its remedial effects.
Course Name: Chemistry-1 Lab (BTCH102-18)	
CO1	Synthesize a small drug molecule and analyse a salt sample
CO2	Measure molecular/system properties such as surface tension, viscosity, conductance of solutions, redox potentials, chloride content of water
CO3	Analyze the acid content of different lubricating oils used in daily life.
CO4	Acquire some technical, theoretical as well as a practical knowledge for introduction to principles and techniques of chromatography
CO5	Study the arrangement of atoms in different structures.
Course Name: Maths -II (BTAM204-18)	
CO1	Recall the various measures of Statistics like arithmetic mean, median and mode, moments, skewness and kurtosis.
CO2	Relate two variables and fit the curves for prediction using data
CO3	Apply probability distributions and their properties.
CO4	Develop probabilistic models for continuous distributions.
CO5	Interpret the sample data for given population.
Course Name: Programming for Problem Solving (BTPS 101-18)	
CO1	Explain the basics of computer hardware and software, algorithm, pseudo codes and programming structures.
CO2	Illustrate the use syntax, semantics and constructs to solve mathematical and logical problems in 'C' language.
CO3	Identify the role of simple data structures, memory allocation and data handling for various applications in 'C'.
CO4	Identify the concept of functions.
CO5	Make use of structures, pointers and file handling to perform various file related operations.
Course Name: Programming for Problem Solving Lab (BTPS 102-18)	
CO1	Determine the algorithms for simple problems using arithmetic expressions.
CO2	Outline problems involving if-then-else structures.
CO3	Devise iterative as well as recursive programs.
CO4	Interpret data in arrays, strings and structures and manipulate them.
CO5	Review the pointers of different types and use them in defining self-referential structures.

Course Name: Workshop/ Manufacturing Practices (BTMP 101-18)	
CO1	Define different manufacturing processes employed in workshop.
CO2	Demonstrate the various process parameters.
CO3	Compare theoretical and practical aspects of the dimensional accuracies and tolerances of different manufacturing processes
CO4	Illustrate the knowledge of different job shops.
CO5	Define the advance manufacturing practices.
Course Name: English (BTHU 101-18)	
CO1	Construct sentences using different forms of a word and illustrate significance of using formal & in-formal words in different context.
CO2	Identify the importance of using formal grammar (such as rules, proper order of words and sequence of sentences) and spot grammatical errors.
CO3	Classify different types of sentence structures (such as simple, compound and complex sentences) and remember usage of it in different contexts.
CO4	Summarize factual information from a text and then paraphrase it using techniques of writing precisely.
CO5	Organize formal writings (business, report, proposal, E-mail, writings) and informal writings such as personal letter & e-mails etc. using a specified format.
Course Name: English Lab (BTHU 102-18)	
CO1	Comprehend spoken English (such as pronunciation of weak forms and contractions, via listening to audio-video aids) and summarize it.
CO2	Identify difference between formal & informal ways (use of body language, gestures, verbal and facial expressions) of holding discussions in a group.
CO3	Illustrate different functions of English Language and make use of them to handle daily routine conversation and dialogues.
CO4	Apply grammatically error free interrogative and affirmative statements while facing interviews.
CO5	Utilize formal & informal vocabulary (such as idioms and phrases) to give presentations.