B.Tech (Robotics and Artificial Intelligence) 1st SEMESTER		
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.	

Course Name: Chemistry-1 (BTCH101-18) COI 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. CO01 Synthesize a small drug molecule and analyse a salt sample 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. Acquire some technical, theoretical as well as a practical knowledge for introduction to principles and techniques of chromatography Study the arrangement of atoms in different structures. CO03 Recall the various measures of Statistics like arithmetic mean, median and mode, moments, skewness and kurtosis. CO3 Relate two variables and fit the curves for prediction using data CO3 Apply probabilistic models for continuous distributions. CO4 Develop probabilistic models for continuous distributions. CO6 Explain the basics of computer hardware and software, algorithm, pseudo codes and programming structures. Illustrate the use syntax, semantics and constructs to solve mathematical and logical problems in 'C' language. Identify the role of simple data structures, memory allocation and data handling for various applications in 'C'. CO4 Identify the concept of functions. CO6 Make use of structures, pointers and file handling to perform various file related operations. CO7 Curve Name: Programming for Problem Solving Lab (BTPS 102-18) Determine the algorithms for simple problems using arithmetic expressions. Outline problems involving if-then-else structures. OO3 Devise iterative as well as recursive programs. CO6 Interpret dat	2 nd SEMESTER		
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CO5 Review the pointers of different types and use them in defining self-referential structures.	CO4	Interpret data in arrays, strings and structures and manipulate them.	
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	Course Name: Workshop/ Manufacturing Practices (BTMP 101-18)		
CO1	Define different manufacturing processes employed in workshop.		
CO2	Demonstrate the various process parameters.		
	Compare theoretical and practical aspects of the dimensional accuracies and tolerances of		
CO3	different manufacturing processes		
CO4	Illustrate the knowledge of different job shops.		
CO5	Define the advance manufacturing practices.		
	Course Name: English (BTHU 101-18)		
	Construct sentences using different forms of a word and illustrate significance of using formal &		
CO1	in-formal words in different context.		
	Identify the importance of using formal grammar (such as rules, proper order of words and		
CO2	sequence of sentences) and spot grammatical errors.		
	Classify different types of sentence structures (such as simple, compound and complex sentences)		
CO3	and remember usage of it in different contexts.		
	Summarize factual information from a text and then paraphrase it using techniques of writing		
CO4	precisely.		
	Organize formal writings (business, report, proposal, E-mail, writings) and informal writings such		
CO5	as personal letter & e-mails etc. using a specified format.		
	Course Name: English Lab (BTHU 102-18)		
	Comprehend spoken English (such as pronunciation of weak forms and contractions, via		
CO1	listening to audio-video aids) and summarize it.		
	Identify difference between formal & informal ways (use of body language, gestures,		
CO2	verbal and facial expressions) of holding discussions in a group.		
	Illustrate different functions of English Language and make use of them to handle daily		
CO3	routine conversation and dialogues.		
	Apply grammatically error free interrogative and affirmative statements while facing		
CO4	interviews.		
CO5	Utilize formal & informal vocabulary (such as idioms and phrases) to give presentations.		