

Department of Computer Science and Engineering (AI)
Course Outcomes (2023-24)

Year	2nd	Semester	3rd
Subject Name	Maths IV	Subject Code/ NBA Code	BAS301/CSAI-202
S. No.	Course Outcomes (CO)		
CO 1	Remember the concept of partial differential equation and to solve partial differential equations		
CO 2	Analyze the concept of partial differential equations to evaluate the problems concerned with partial differential equations		
CO 3	Understand the concept of correlation, moments, skewness and kurtosis and curve fitting		
CO 4	Remember the concept of probability to evaluate probability distributions		
CO 5	Apply the concept of hypothesis testing and statistical quality control to create control charts		

Amz

Year	2nd	Semester	3rd
Subject Name	Universal Human Values	Subject Code/ NBA Code	BVE-301/CSAI-204
S. No.	Course Outcomes (CO)		
CO 1	To help the students appreciate the essential complementarity between 'VALUES' and 'SKILLS' to ensure sustained happiness and prosperity, which are the core aspirations of all human beings.		
CO 2	To facilitate the development of a Holistic perspective among students towards life and profession as well as towards happiness and prosperity based on a correct understanding of the Human reality and the rest of Existence. Such a holistic perspective forms the basis of Universal Human Values and movement		
CO 3	To highlight plausible implications of such a Holistic understanding in terms of ethical human conduct, trustful and mutually fulfilling human behavior and mutually enriching interaction with Nature.		
CO 4	Understanding Harmony in the Nature and Existence - Whole existence as Co-existence		
CO 5	Implications of the above Holistic Understanding of Harmony on Professional Ethics.		

Kavya

Year	2nd	Semester	3 rd
Subject Name	Data Structures	Subject Code/ NBA Code	BCS-301/CSAI-205
S. No.	Course Outcomes (CO)		
CO 1	To Describe how arrays, linked lists, stack, queues, trees, and graphs are represented in memory, used by the algorithms and their common applications.		
CO 2	To Discuss the computational efficiency of the sorting and searching algorithms.		
CO 3	To Implement Trees and Graphs and perform various operations on these data		
CO 4	To Understanding the concept of recursion, application of recursion and its implementation and removal of recursion.		
CO 5	To Identify the alternative implementations of data structures with respect to its performance to solve a real-world problem.		

Priyanka

Year	2nd	Semester	3 rd
Subject Name	Computer Organization & Architecture	Subject Code/ NBA Code	BCS-302/CSAI-206
S. No.	Course Outcomes (CO)		
CO 1	Study of the basic structure and operation of a digital computer system.		
CO 2	Analysis of the design of arithmetic & logic unit and understanding of the fixed point and floating-point arithmetic operations		
CO 3	Implementation of control unit techniques and the concept of Pipelining.		
CO 4	Understanding the hierarchical memory system, cache memories and virtual		
CO 5	Understanding the different ways of communicating with I/O devices and standard I/O.		

AB

Year	2nd	Semester	3 rd
Subject Name	Discrete Structures and Theory of Logic	Subject Code/ NBA Code	BCS-303/CSAI-207
S. No.	Course Outcomes (CO)		
CO 1	Write an argument using logical notation and determine if the argument is or is not valid.		
CO 2	Understand the basic principles of sets and operations in sets.		
CO 3	Demonstrate an understanding of relations and functions and be able to determine their properties.		
CO 4	Demonstrate different traversal methods for trees and graphs.		
CO 5	Model problems in Computer Science using graphs and trees.		

AB
 Head of Department
 Computer Science & Engineering (AI)
 APJKTU Institute of Technology
 Chazhikar

Year	2nd	Semester	3rd
Subject Name	Data Structures Using C Lab	Subject Code/ NBA Code	BCC-351/CSAI-208
S. No.	Course Outcomes (CO)		
CO 1	To implement various operations on arrays and linked lists.		
CO 2	To implement various linear as well as non linear data structures using static and dynamic memory methods.		
CO 3	To implement various searching and sorting methods.		

Poojanka

Year	2nd	Semester	3 rd
Subject Name	Computer Organization Lab	Subject Code/ NBA Code	BCS352/CSAI-209
S. No.	Course Outcomes (CO)		
CO 1	Design and implement basic logic gates, Binary code conversions. Implementing 3-8 line DECODER and Implementing MULTIPLEXERS. Implementing HALF adder/subtractor and FULL Adder /Subtractor using basic logic gates		
CO 2	Verify the excitation tables of various FLIP-FLOPS		
CO 3	Design of an 8-bit Input/ Output system with four 8-bit Internal Registers. Design of an 8- bit ARITHMETIC LOGIC UNIT , Design and Implement SISO and SIPO		
CO 4	Write an algorithm and program to perform matrix multiplication of two n * n matrices on the 2-D mesh SIMD model, Hypercube SIMD Model or		
CO 5	Study of Scalability for Single Board, Multi-board, multi-core, multiprocessor using Simulator.		

Yadav

Year	2nd	Semester	3rd
Subject Name	Web Designing Lab	Subject Code/ NBA Code	BCS353/CSAI-210
S. No.	Course Outcomes (CO)		
CO 1	To understand knowledge on designing static and dynamic web pages using HTML.		
CO 2	To apply Java Script Programming for validations in form.		
CO 3	To apply CSS for web designing.		

Saha

Saha
 Head of Department
 Computer Science & Engineering (AI)
 ABES Institute of Technology
 Guna, Odisha

Year	2nd	Semester	3rd
Subject Name	Mini Project OR Internship Assessment	Subject Code/ NBA Code	BCS351/CSAI-211
S. No.	Course Outcomes (CO)		
CO 1	Developing a technical artifact requiring new technical skills and effectively utilizing a new software tool to complete a task		
CO 2	Writing requirements documentation, selecting appropriate technologies, identifying and creating appropriate test cases for systems.		
CO 3	Demonstrating understanding of professional customs & practices and working with professional standards.		
CO 4	Improving problem-solving, critical thinking skills and report writing.		
CO 5	Learning professional skills like exercising leadership, behaving professionally, behaving ethically, listening effectively, participating as a member of a team, developing appropriate workplace attitudes.		

Handwritten signature

Year	2nd	Semester	3 RD
Subject Name	Python Programming	Subject Code/ NBA Code	BCC-402/CSAI-213
S. No.	Course Outcomes (CO)		
CO 1	Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.		
CO 2	Express proficiency in the handling of strings and functions		
CO 3	Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples and sets.		
CO 4	Identify the commonly used operations involving file systems and regular		
CO 5	Articulate the Object-Oriented Programming concepts such as encapsulation, inheritance and polymorphism as used in Python		


Handwritten signature

Handwritten signature
Head of Department
Computer Science & Engineering (AI)
ABES Institute of Technology
Ghaziabad

Year	2nd	Semester	4th
Subject Name	Sensor & Instrumentation	Subject Code/ NBA Code	BOE-405/CSAI-214
S. No.	Course Outcomes (CO)		
CO 1	Apply the use of sensors for measurement of displacement, force and pressure.		
CO 2	Employ commonly used sensors in industry for measurement of temperature, position, accelerometer, vibration sensor, flow and level.		
CO 3	Demonstrate the use of virtual instrumentation in automation industries		
CO 4	Identify and use data acquisition methods.		
CO 5	Comprehend intelligent instrumentation in industrial automation.		

Year	2nd	Semester	4th
Subject Name	Technical Communication	Subject Code/ NBA Code	KCS403/ C 215
S. No.	Course Outcomes (CO)		
CO 1	Students will be able to UNDERSTAND the nature and objective of Technical Communication relevant for the work place as Engineers.		
CO 2	Students will be able to DEVELOP an understanding of key concepts of writing, designing and speaking.		
CO 3	Students will be able to UTILIZE the technical writing skills for the purposes of Technical Communication and its exposure in various dimensions.		
CO 4	Students will be able BUILD UP interpersonal communication traits that will make the transition from institution to workplace smoother and help them to excel in their jobs.		
CO 5	Students will be able to APPLY technical communication to build their personal brand and handle crisis communication.		

Year	2nd	Semester	4th
Subject Name	Operating System	Subject Code/ NBA Code	BCS401/CSAI- 218
S. No.	Course Outcomes (CO)		
CO 1	Understand the structure and functions of OS		
CO 2	Learn about Processes, Threads and Scheduling algorithms.		
CO 3	Understand the principles of concurrency and Deadlocks		
CO 4	Learn various memory management scheme		
CO 5	Study I/O management and File systems.		


 Head of Department
 Computer Science & Engineering (AI)
 ABES Institute of Technology
 Hazratnagar

Year	2nd	Semester	4th
Subject Name	Theory of Automata and Formal Languages	Subject Code/ NBA Code	BCS402/ CSAI-219
S. No.	Course Outcomes (CO)		
CO 1	Analyze and design finite automata, pushdown automata, Turing machines, formal languages, and grammars		
CO 2	Analyze and design, Turing machines, formal languages, and grammars		
CO 3	Demonstrate the understanding of key notions, such as algorithm, computability, decidability, and complexity through problem solving		
CO 4	Prove the basic results of the Theory of Computation.		
CO 5	State and explain the relevance of the Church-Turing thesis		

vijay

Year	2nd	Semester	4th
Subject Name	Object Oriented Programming with Java	Subject Code/ NBA Code	BCS-403/ CSAI-220
S. No.	Course Outcomes (CO)		
CO 1	Develop the object-oriented programming concepts using Java		
CO 2	Implement exception handling, file handling, and multi-threading in Java		
CO 3	Apply new java features to build java programs.		
CO 4	Analyze java programs with Collection Framework		
CO 5	Test web and Restful Web Services with Spring Boot using Spring Framework concepts		

Rajendra Singh

[Signature]
Head of Department
 Computer Science & Engineering (AI)
 ABES Institute of Technology
 Ghaziabad

Year	2nd	Semester	4th
Subject Name	Operating Systems Lab	Subject Code/ NBA Code	BCS451/CSAI-221
S. No.	Course Outcomes (CO)		
CO 1	Implement CPU Scheduling Algorithms such as FCFS, SJF, SRTF, PRIORITY and Round Robin.		
CO 2	Demonstrate all Page Replacement Algorithms FIFO, LRU.		
CO 3	Execute Disk Scheduling Algorithm.		

Neelkamal

Year	2nd	Semester	4th
Subject Name	Object Oriented Programming with Java Lab	Subject Code/ NBA Code	BCS-452/CSAI-222
S. No.	Course Outcomes (CO)		
CO 1	Understand the basics of object-oriented programming using JAVA.		
CO 2	Apply the concept of classes, Java, JDK Components and develop		
CO 3	Develop Simple Java Programs using inheritance and Exception		
CO 4	Demonstrate the concept of Collections, Comparators and Interfaces		
CO 5	Interpret the need for advanced Java concepts like spring, Auto boxing and annotations.		

Year	2nd	Semester	4th
Subject Name	Cyber Security Workshop	Subject Code/ NBA Code	BCS-453/CSAI-223
S. No.	Course Outcomes (CO)		
CO 1	Apply Basic packet inspection, Detecting Suspicious Activity, Malware Traffic Analysis, Password Sniffing and ARP Poisoning Attack using wire shark.		
CO 2	Apply SQL Injection, Cross-Site Scripting (XSS), Cross-Site Request Forgery (CSRF),		

Rizyanta Singh

Senker
 Head of Department
 Computer Science & Engineering (AI)
 ABES Institute of Technology
 Ghaziabad

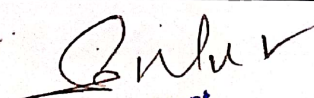
Year	2nd	Semester	4th
Subject Name	Cyber Security	Subject Code/ NBA Code	BCS-401/CSAI-224
S. No.	Course Outcomes (CO)		
CO 1	Understand the basic concepts of cyber security and cybercrimes.		
CO 2	Understand the security policies and cyber laws.		
CO 3	Understand the tools and methods used in cyber crime		
CO 4	Understand the concepts of cyber forensics		
CO 5	Understand the cyber security policies and cyber laws		



Year	2nd	Semester	4th
Subject Name	Sports and Yoga-II	Subject Code/ NBA Code	BVE-451/CSAI-226
S. No.	Course Outcomes (CO)		
CO 1	To maintain their mental and physical wellness upright and develop ability in them to cope up with the stress arising in the life.		
CO 2	To create space in the curriculum to nurture the potential of the students in sports/games/yoga etc.		
CO 3	To take forward the previous course on the topic to next advance level in terms of practice and specialization.		



Year	3rd	Semester	5th
Subject Name	Database Management System	Subject Code/ NBA Code	KCS501/CSAI- 301
S. No.	Course Outcomes (CO)		
CO 1	Apply knowledge of database for real life applications.		
CO 2	Apply query processing techniques to automate the real time problems of databases.		
CO 3	Identify and solve the redundancy problem in database tables using normalization.		
CO 4	Understand the concepts of transactions, their processing so they will familiar with broad range of database management issues including data integrity, security and recovery.		
CO 5	Design, develop and implement a small database project using database tools		


 Head of Department
 Computer Science & Engineering (AI)
 ABES Institute of Technology
 Ghaziabad

Abh

Year	3rd	Semester	5th
Subject Name	Artificial Intelligence	Subject Code/ NBA Code	KAI-501/ CSAI- 302
S. No.	Course Outcomes (CO)		
CO 1	Understand the basics of the theory and practice of Artificial Intelligence as a discipline and about intelligent agents.		
CO 2	Understand search techniques and gaming theory.		
CO 3	The student will learn to apply knowledge representation techniques and problem solving strategies to common AI applications.		
CO 4	Student should be aware of techniques used for classification and clustering.		
CO 5	Student should aware of basics of pattern recognition and steps required for it. <i>Sandhu</i>		

Year	3rd	Semester	5 th
Subject Name	Design and Analysis of Algorithm	Subject Code/ NBA Code	KCS503/ CSAI- 303
S. No.	Course Outcomes (CO)		
CO 1	Design new algorithms, prove them correct, and analyze their asymptotic and absolute runtime and memory demands.		
CO 2	Find an algorithm to solve the problem (create) and prove that the algorithm solves the problem correctly (validate).		
CO 3	Understand the mathematical criterion for deciding whether an algorithm is efficient, and know many practically important problems that do not admit any		
CO 4	Apply classical sorting, searching, optimization and graph algorithms.		
CO 5	Understand basic techniques for designing algorithms, including the techniques of recursion, divide-and-conquer, and greedy.		

Year	3rd	Semester	5th
Subject Name	Object Oriented System Design	Subject Code/ NBA Code	KCS054 / CSAI- 304
S. No.	Course Outcomes (CO)		
CO 1	Understand the application development and analyze the insights of object oriented		
CO 2	Understand, analyze and apply the role of overall modeling concepts (i.e. System, structural)		
CO 3	Understand, analyze and apply oops concepts (i.e. abstraction, inheritance)		
CO 4	Understand the basic concepts of C++ to implement the object oriented concepts		
CO 5	To understand the object oriented approach to implement real world problem.		

Sandhu
Head of Department
Computer Science & Engineering (AI)
ABES Institute of Technology
Gurgaon

Year	3rd	Semester	5th
Subject Name	Applications of Soft Computing	Subject Code/ NBA Code	KCS-056/CSAI- 305
S. No.	Course Outcomes (CO)		
CO 1	Recognize the feasibility of applying a soft computing methodology for a particular problem.		
CO 2	Understand the concepts and techniques of soft computing and foster their abilities in designing and implementing soft computing based solutions for real-world and engineering problems.		
CO 3	Apply neural networks to pattern classification and regression problems and compare solutions by various soft computing approaches for a given problem.		
CO 4	Apply fuzzy logic and reasoning to handle uncertainty and solve engineering problems.		
CO 5	Apply genetic algorithms to combinatorial optimization problems. <i>Vineel</i>		

Year	3rd	Semester	5th
Subject Name	Database Management System Lab	Subject Code/ NBA Code	KCS-551/ CSAI-306
S. No.	Course Outcomes (CO)		
CO 1	Understand and apply oracle 11 g products for creating tables, views, indexes, sequences and other database objects.		
CO 2	Design and implement a database schema for company data base, banking data base, library information system, payroll processing system, student information		
CO 3	Write and execute simple and complex queries using DDL, DML, DCL and TCL		
CO 4	Write and execute PL/SQL blocks, procedure functions, packages and triggers, cursors. K4, K5 constraints on database.		
CO 5	Enforce entity integrity, referential integrity, key constraints, and domain <i>Abhishek</i>		

Year	3 rd	Semester	5 th
Subject Name	Artificial Intelligence Lab	Subject Code/ NBA Code	KAI-551/ CSAI- 307
S. No.	Course Outcomes (CO)		
CO 1	Use of python to understand the concept of AI		
CO 2	Implementation of Different AI Techniques		
CO 3	Application of AI techniques in practical Life		
CO 4	Understanding of Natural Language Tool Kit.		
CO 5	Practical Application of Natural Language Tool Kit.		

Sanjay
 Head of Department
 Computer Science & Engineering (AI)
 RES Institute of Technology

Year	3 rd	Semester	5 th
Subject Name	DAA Lab	Subject Code/ NBA Code	KCS-553/ CSAI-308
S. No.	Course Outcomes (CO)		
CO 1	Implement algorithm to solve problems by iterative approach.		
CO 2	Implement algorithm to solve problems by divide and conquer approach		
CO 3	Implement algorithm to solve problems by Greedy algorithm approach.		
CO 4	Implement algorithm to solve problems by Dynamic programming, backtracking, branch and bound approach.		
CO 5	Implement algorithm to solve problems by branch and bound approach.		

Pragy

Year	3 rd	Semester	5 th
Subject Name	Mini Project or Internship Assessment*	Subject Code/ NBA Code	KCS-554/ CSAI-309
S. No.	Course Outcomes (CO)		
CO 1	Identify a problem and gather its requirements.		
CO 2	Design a solution of the problem using latest tools & techniques.		
CO 3	Develop a project using latest technology.		
CO 4	Develop professional skills and critical thinking to prepare for major project.		
CO 5	Demonstrate ability to present project works to the evaluators.		

Pragy

Year	3 rd	Semester	5 th
Subject Name	Constitution of India, Law and Engineering	Subject Code/ NBA Code	KNC501/ CSAI- 310
S. No.	Course Outcomes (CO)		
CO 1	Identify and explore the basic features and modalities about Indian constitution.		
CO 2	Differentiate and relate the functioning of Indian parliamentary system at the center and state level.		
CO 3	Differentiate different aspects of Indian Legal System and its related bodies.		
CO 4	Discover and apply different laws and regulations related to engineering		
CO 5	Correlate role of engineers with different organizations and governance models		

Pragy

Sanku
Head of Department
Computer Science & Engineering (AI)
RES Institute of Technology

Year	3rd	Semester	6th
Subject Name	Machine Learning Techniques	Subject Code/ NBA Code	KAI-601/ CSAI- 311
S. No.	Course Outcomes (CO)		
CO 1	To understand the need for machine learning for various problem solving.		
CO 2	To understand a wide variety of learning algorithms and how to evaluate models generated from data		
CO 3	To understand the latest trends in machine learning		
CO 4	To design appropriate machine learning algorithms and apply the algorithms to a real world problems		
CO 5	To optimize the models learned and report on the expected accuracy that can be achieved by applying the models.		

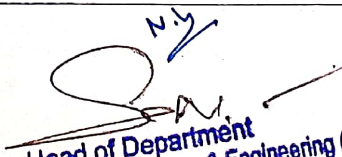
Year	3rd	Semester	6th
Subject Name	Web Technology	Subject Code/ NBA Code	KCS602/ CSAI- 312
S. No.	Course Outcomes (CO)		
CO 1	Explain web development Strategies and Protocols governing Web.		
CO 2	Develop Java programs for window/web-based applications.		
CO 3	Design web pages using HTML, XML, CSS and JavaScript.		
CO 4	Creation of client-server environment using socket programming		
CO 5	Building enterprise level applications and manipulate web databases using JDBC		

Year	3rd	Semester	6th
Subject Name	Computer Network	Subject Code/ NBA Code	KCS603/ CSAI- 313
S. No.	Course Outcomes (CO)		
CO 1	Explain basic concepts, OSI reference model, services and role of each layer of OSI model and TCP/IP, networks devices and transmission media, Analog and digital data transmission		
CO 2	Apply channel allocation, framing, error and flow control techniques.		
CO 3	Describe the functions of Network Layer i.e. Logical addressing, sub netting & Routing Mechanism		
CO 4	Explain the different Transport Layer function i.e. Port addressing, Connection Management, Error control and Flow control mechanism.		
CO 5	Explain the functions offered by session and presentation layer and their Implementation.		
CO 6	Explain the different protocols used at application layer i.e. HTTP, SNMP, SMTP, FTP, TELNET and VPN.		

Year	3rd	Semester	6th
Subject Name	Software Engineering	Subject Code/ NBA Code	KD-063/CSAI-314
S. No.	Course Outcomes (CO)		
CO 1	Explain various software characteristics and analyze different software Development Models.		
CO 2	Demonstrate the contents of a SRS and apply basic software quality assurance practices to ensure that design, development meet or exceed applicable		
CO 3	Compare and contrast various methods for software design		
CO 4	Formulate testing strategy for software systems, employ techniques such as unit testing, Test driven development and functional testing.		
CO 5	Manage software development process independently as well as in teams and make use of Various software management tools for development, maintenance and analysis.		

Year	3rd	Semester	6th
Subject Name	EMBEDDED SYSTEM	Subject Code/ NBA Code	KOE062/ CSAI-315
S. No.	Course Outcomes (CO)		
CO 1	Understand the basics of embedded system and its structural units.		
CO 2	To Analyze the embedded system specification and develop software programs.		
CO 3	Evaluate the requirements of the programming embedded systems, related software architecture.		
CO 4	Understand the RTOS based embedded system design.		
CO 5	Understand all the applications of the embedded system and designing issues.		

Year	3rd	Semester	6th
Subject Name	Machine Learning Lab	Subject Code/ NBA Code	KAI-651/ CSAI- 316
S. No.	Course Outcomes (CO)		
CO 1	Understand complexity of Machine Learning algorithms and their limitations;		
CO 2	Understand modern notions in data analysis-oriented computing		
CO 3	Be capable of performing experiments in Machine Learning using real-world data		


 Head of Department
 Computer Science & Engineering (AI)
 ABES Institute of Technology
 Ghaziabad

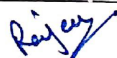
CO 4	Be capable of confidently applying common Machine Learning algorithms in practice and implementing their own.
-------------	---

Year	3rd	Semester	6th
Subject Name	Web Technology Lab	Subject Code/ NBA Code	KCS-652/ CSAI-317
S. No.	Course Outcomes (CO)		
CO 1	Develop static web pages using HTML		
CO 2	Develop Java programs for window/web-based applications.		
CO 3	Design dynamic web pages using JavaScript and XML.		
CO 4	Design dynamic web page using server site programming Ex. ASP/JSP/PHP		
CO 5	Design server site applications using JDDC, ODBC and session tracking API		

Year	3rd	Semester	6th
Subject Name	Computer Networks Lab	Subject Code/ NBA Code	KCS-653/ CSAI-318
S. No.	Course Outcomes (CO)		
CO 1	Simulate different network topologies.		
CO 2	Implement various framing methods of Data Link Layer.		
CO 3	Implement various Error and flow control techniques.		
CO 4	Implement network routing and addressing techniques.		
CO 5	Implement transport and security mechanisms		

Year	3rd	Semester	6th
Subject Name	Indian Tradition, Culture, and Society	Subject Code/ NBA Code	KNC 602/ CSAI-319
S. No.	Course Outcomes (CO)		
CO 1	Identify and explore the basic features and modalities about Indian constitution.		
CO 2	Differentiate and relate the functioning of Indian parliamentary system at the center and state level.		
CO 3	Differentiate different aspects of Indian Legal System and its related bodies.		
CO 4	Discover and apply different laws and regulations related to engineering		
CO 5	Correlate role of engineers with different organizations and governance models		


 Head of Department
 Computer Science & Engineering (AI)
 ABES Institute of Technology
 Ghaziabad


 Rajeev

Year	4th	Semester	7th
Subject Name	Rural Development Adm.& Planning	Subject Code/ NBA Code	KHU701/CSAI-401
S. No.	Course Outcomes (CO)		
CO 1	Students can understand the definitions, concepts and components of Rural Development		
CO 2	Students will know the importance, structure, significance, resources of Indian rural economy.		
CO 3	Students will have a clear idea about the area development programmes and its impact.		
CO 4	Students will be able to acquire knowledge about rural entrepreneurship.		
CO 5	Students will be able to understand about the using of different methods for human resource planning		

Preethi

Year	4th	Semester	7th
Subject Name	Renewable Energy Resource	Subject Code/ NBA Code	KOE074/ CSAI- 402
S. No.	Course Outcomes (CO)		
CO 1	Understand of renewable and non-renewable sources of energy. Explain the basic knowledge of Non-Conventional energy resources with focusing on Solar Cell.		
CO 2	Distinguish the various Solar Cell material and its efficiency. Gain knowledge about working principle of various solar energy systems		
CO 3	Explain the working principal, performance and limitation of Geothermal Energy, MHD and Fuel Cell.		
CO 4	Explain the working principal, performance and limitation of Wind Energy. Understand the application of wind energy and wind energy conversion system		
CO 5	Illustrate the working principal, performance and limitation of OTEC Wave and Tidal Energy. Understand the applications of different renewable energy sources like ocean thermal, hydro, geothermal energy etc.		

Prasanna

[Signature]
 Head of Department
 Computer Science & Engineering (AI)
 ABES Institute of Technology
 Ghaziabad

Year	4th	Semester	7 th
Subject Name	Natural Language Processing	Subject Code/ NBA Code	KCS072/ CSAI- 403
S. No.	Course Outcomes (CO)		
CO 1	To learn the fundamentals of natural language processing		
CO 2	To understand the use of CFG and PCFG in NLP		
CO 3	To understand the role of semantics of sentences and pragmatic		
CO 4	To Introduce Speech Production And Related Parameters Of Speech.		
CO 5	To Show The Computation And Use Of Techniques Such As Short Time Fourier Transform, Linear Predictive Coefficients And Other Coefficients In The Analysis Of Speech.		

Hina

Year	4th	Semester	7 th
Subject Name	Cloud Computing	Subject Code/ NBA Code	KCS-713/ CSAI 404
S. No.	Course Outcomes (CO)		
CO 1	Describe architecture and underlying principles of cloud computing.		
CO 2	Explain need, types and tools of Virtualization for cloud.		
CO 3	Describe Services Oriented Architecture and various types of cloud services.		
CO 4	Explain Inter cloud resources management cloud storage services and their providers Assess security services and standards for cloud computing.		
CO 5	Analyze advanced cloud technologies.		

Sadhu

Year	4th	Semester	7 th
Subject Name	Cloud Computing Lab	Subject Code/ NBA Code	KCS-751A/CSAI-405
S. No.	Course Outcomes (CO)		
CO 1	Explain the various paradigms of cloud computing and computing techniques.		
CO 2	Articulate the concepts, key technologies, strength and limitation of cloud computing and possible application		
CO 3	Identify the architecture and infrastructure of cloud computing including SaaS, PaaS, IaaS, public cloud, private cloud and hybrid cloud.		
CO 4	Interpret various data, scalability and cloud services to acquire efficient database		

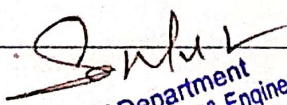
Sadhu
Head of Department
Computer Science & Engineering (AI)
ABES Institute of Technology
Chaziabad

CO 5	Analyze the concept of Cloud computing Web Applications
------	---

Year	4th	Semester	7 th
Subject Name	Mini Project or Internship Assessment	Subject Code/ NBA Code	KCS-752/CSAI- 406
S. No.	Course Outcomes (CO)		
CO 1	Developing a technical artifact requiring new technical skills and effectively utilizing a new software tool to complete a task		
CO 2	Writing requirements documentation, Selecting appropriate technologies, identifying and creating appropriate test cases for systems.		
CO 3	Demonstrating understanding of professional customs & practices and working with professional standards.		
CO 4	Improving problem-solving, critical thinking skills and report writing.		
CO 5	Learning professional skills like exercising leadership, behaving professionally, behaving ethically, listening effectively, participating as a member of a team, developing appropriate workplace attitudes.		

Year	4th	Semester	7 th
Subject Name	Project	Subject Code/ NBA Code	KCS753/CSAI- 407
S. No.	Course Outcomes (CO)		
CO 1	Analyze and understand the real life problem and apply their knowledge to get programming solution.		
CO 2	Engage in the creative design process through the integration and application of diverse technical knowledge and expertise to meet customer needs and address social		
CO 3	use the various tools techniques, coding practices for developing real life solution to the problem.		
CO 4	Find out the errors in software solutions and establishing the process to design maintainable software application.		
CO 5	Write the report about what they are doing in the Project and learning the team working skills.		

Year	4th	Semester	8 th
Subject Name	Project Management and Entrepreneurship	Subject Code/ NBA Code	KHU-802 / CSAI- 408
S. No.	Course Outcomes (CO)		
CO 1	Students can understand the definitions of entrepreneurship; need scope and classification of entrepreneurship.		

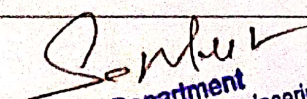

 Head of Department
 Computer Science & Engineering (AI)
 ABES Institute of Technology
 Ghaziabad

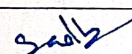
CO 2	Students will know the importance, structure, significance, idea and resources of Innovation.
CO 3	Students will have a clear idea about the area development of Project and its Management.
CO 4	Students will be able to acquire knowledge about Project Financing.
CO 5	Students will be able to understand about the social entrepreneurship, innovation, sustainability, risk management and legal framework.

Year	4th	Semester	8th
Subject Name	Entrepreneurship Development	Subject Code/ NBA Code	KOE-083 / CSAI- 409
S. No.	Course Outcomes (CO)		
CO 1	Understand the growth of Small scale industries in developing countries and their positions vis-a-vis large industries		
CO 2	Design assessment of liability formulation evaluation financing field study and collection of information preparation of project report.		
CO 3	Realization of planning and production control quality control marketing Industrial Relations sales and purchases advertisement.		
CO 4	Aware the financial functions cost of capital approaching project management control economic Evaluation waste analysis capital expenditure		
CO 5	Understand role of various National and state Agencies which render assistance to small scale industry		



Year	4th	Semester	8th
Subject Name	Digital And Social Media Marketing	Subject Code/ NBA Code	KOE-094 / CSAI- 410
S. No.	Course Outcomes (CO)		
CO 1	Understand the concept of digital marketing and its real-world iterations		
CO 2	Articulate innovative insights of digital marketing enabling a competitive edge		
CO 3	Understand how to create and run digital media based campaigns		
CO 4	Identify and utilize various tools such as social media etc.		
CO 5	Measure the impact of a social media campaign in terms of a specific marketing objective		


 Head of Department
 Computer Science & Engineering (AI)
 ABES Institute of Technology
 Ghaziabad



Year	4th	Semester	8 th
Subject Name	Project	Subject Code/ NBA Code	KCS-851 / CSAI- 411
S. No.	Course Outcomes (CO)		
CO 1	Identify socio technical problems and their feasibility.		
CO 2	Apply a suitable software development model for the real-world problem.		
CO 3	Design engineering solutions to complex problems by utilizing a systematic approach.		
CO 4	Solve the real-life problems by using the various tools, techniques, and coding practices.		
CO 5	Take part in written and verbal communication with professional and community at large.		

Nived

S. K. L.
 Head of Department
 Computer Science & Engineering (AI)
 ABES Institute of Technology
 Ghaziabad