Shri Siddheshwar Devasthan, Solapur.
Shree Siddheshwar Women's College of Engineering, Solapur.
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Department of Computer Science and Engineering(Artificial Intelligence & Data Science)

Course Outcomes of all courses

Second Year(Sem-I)	
Course code: BTES301	**Course name: Engineering Mathematics – III**
COs	**After the successful completion of this course student will be able to:**
CO1	Understand the concept of LT & ILT.
CO2	Solve problems related to Fourier transform to Deep Learning, Signal & Image processing.
CO3	Understand the concepts of linear algebra and apply Linear Programming, Computer Graphics and Cryptography.
CO4	Understand the concepts of PDE and apply it in data analysis.
CO5	Analyze function of complex variables.
Course code: BTAIC302	**Course name:An Introduction to Artificial Intelligence**
COs	**After the successful completion of this course student will be able to:**
CO1	Discuss Meaning, Scope and Stages of Artificial Intelligence
CO2	Understand and Implement Problem Space and Search Strategies for Solving problems.
CO3	Discuss the Search Techniques and Knowledge Representation.
CO4	Apply search for solving Constraint Satisfaction Problems and Game-playing.
CO5	Discover the Application of Artificial Intelligence and Analyze Impact of AI on Society
Course code: BTAIC303	**Course name: Data Structure and Algorithm usin Python**
COs	**After the successful completion of this course student will be able to:**
CO1	Write programs using basic concepts of Python Programming
CO2	Implement algorithms for arrays, linked structures, stacks, queues, trees, and graphs
CO3	Write programs that use arrays, linked structures, stacks, queues, trees, and graphs
CO4	Compare and contrast the benefits of dynamic and static data structures implementation
CO5	Discuss the computational efficiency of the principal algorithms for sorting, searching, and hashing
Course code: BTESC304	**Course name: Computer Architecture & Operating Systems**
COs	**After the successful completion of this course student will be able to:**
CO1	To learn how computer works
CO2	To learn the basic instruction set

CO3	Analyze the performance of Computer
CO4	Understand the designing of computer
CO5	Understand the design of control unit
Course code: BTESC305	**Course name: Digital Logic & Signal Processing**
COs	**After the successful completion of this course student will be able to:**
CO1	Understand the theory and architecture of central processing unit & Analyze some of the design issues in terms of speed, technology, cost, performance
CO2	Use appropriate tools to design verify and test the CPU architecture & Learn the concepts of parallel processing, pipelining and inter processor communication.
CO3	Understand the architecture and functionality of central processing unit & Exemplify in a better way the I/O and memory organization, Memory management systems, Virtual Memory
CO4	Describe and explain the fundamental components of a computer operating system
CO5	Define, restate, discuss, and explain the policies for scheduling, deadlocks, memory management, synchronization, system calls, and file systems.
Course code: BTAIL306	**Course name: Artificial Intelligence Lab**
COs	**After the successful completion of this course student will be able to:**
CO1	Discuss Meaning, Scope and Stages of Artificial Intelligence
CO2	Understand and Implement Problem Space and Search Strategies for Solving problems.
CO3	Discuss the Search Techniques and Knowledge Representation.
CO4	Apply search for solving Constraint Satisfaction Problems and Game-playing.
CO5	Discover the Application of Artificial Intelligence and Analyze Impact of AI on Society
Course code:BTAIL306(b)	**Course name:Data Structure and Algorithm using Python Lab**
COs	**After the successful completion of this course student will be able to:**
CO1	Write programs using basic concepts of Python Programming
CO2	Implement algorithms for arrays, linked structures, stacks, queues, trees, and graphs
CO3	Write programs that use arrays, linked structures, stacks, queues, trees, and graphs
CO4	Compare and contrast the benefits of dynamic and static data structures implementation
CO5	Discuss the computational efficiency of the principal algorithms for sorting, searching, and hashing
Course code: BTAIS307	**Course name: Seminar – I**
COs	**After the successful completion of this course student will be able to:**
CO1	TO Demonstrate a sound technical knowledge of their selected seminar topic
CO2	To Undertake problem identification,
CO3	TO formulate and solution for a Problem

CO4	To Design engineering solutions to complex problems utilizing a systems approach
CO5	To Provide Effective presentation and improve soft skills
Course code: BTES211P Course name: Field Training / Internship / Industrial Training Evaluation	
COs	**After the successful completion of this course student will be able to:**
CO1	Integrate theory and practice.
CO2	Apply various soft skills such as time management, positive attitude and communication skills during performance of the tasks assigned in internship organization.
CO3	Determine the challenges and potential for his / her internship organization in particular and the sector in general.
CO4	Construct the company profile by compiling the brief history, management structure, products / services offered, key achievements and market performance for his / her organization of internship.
Second Year (Sem-II)	
Course code: BTAIC401	**Course name: Data Analysis**
COs	**After the successful completion of this course student will be able to:**
1	Apply preprocessing techniques to convert raw data so as to enable further analysis
2	Apply exploratory data analysis and create insightful visualizations to identify patterns
3	Understand how to derive the probability density function of transformations of random variables and use these techniques to generate data from various distributions
4	Understand the statistical foundations of data science and analyze the degree of certainty of predictions using statistical test and models
5	Introduce machine learning algorithms for prediction and to derive insights
Course code: BTAIC402	**Course name: Database Management System**
COs	**After the successful completion of this course student will be able to:**
CO1	Master the basic concepts of relational DBMS and its types.
CO2	Perform various types of operations on relational databases using DDL, DML, DCL in SQL
CO3	Understand the concept of how non-relational databases differ from relational databases from a practical perspective.
CO4	Master the basic concepts of designing NoSQL database management system.
CO5	Able to Identify what type of NoSQL database to implement based on business requirements
Course code:BTHM403	**Course name:Basic Human Rights**
COs	**After the successful completion of this course student will be able to:**
1	Students will be able to understand the history of human rights.
2	Students will learn to respect others caste, religion, region and culture.

3	Students will be aware of their rights as Indian citizen.
4	Students will be able to understand the importance of groups and communities in the society.
5	Students will be able to realize the philosophical and cultural basis and historical perspectives of human rights.
Course code: BTBS404	**Course name: Probability Theory and Random Processes**
COs	**After the successful completion of this course student will be able to:**
CO1	Understand the fundamental knowledge of the concepts of probability and have knowledge of standard distributions which can describe real life phenomenon
CO2	Understand the basic concepts of one and two dimensional random variables and apply in engineering applications
CO3	Apply the concept random processes in engineering disciplines
CO4	Understand and apply the concept of correlation and spectral densities
CO5	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
Course code:BTAIPE405D	**Course name: Programming in JAVA**
COs	**After the successful completion of this course student will be able to:**
CO1	To understand basics of JAVA
CO2	To use Packages & interfaces
CO3	To apply Exception Handling & Multithreaded Programming
CO4	To acquire Java Database Connectivity
CO5	To recognize Applet, Event Handling and AWT
Course code:BTAIL406(a)	**Course name: Data Analysis and Database Management System Lab**
BTAIL406(a) : Data Analysis Lab	
COs	**After the successful completion of this course student will be able to:**
CO1	Apply preprocessing techniques to convert raw data so as to enable further analysis
CO2	Apply exploratory data analysis and create insightful visualizations to identify patterns
CO3	Understand how to derive the probability density function of transformations of random variables and use these techniques to generate data from various distributions
CO4	Understand the statistical foundations of data science and analyze the degree of certainty of predictions using statistical test and models
CO5	Introduce machine learning algorithms for prediction and to derive insights
Course code: BTAIL406(b)	**Course name: Database Management System Lab**
CO1	Master the basic concepts of relational DBMS and its types.
CO2	Perform various types of operations on relational databases using DDL, DML, DCL in SQL

CO3	Understand the concept of how non-relational databases differ from relational databases from a practical perspective.
CO4	Master the basic concepts of designing NoSQL database management system.
CO5	Able to Identify what type of NoSQL database to implement based on business requirements
Course code: BTCOS407	**Course name: Seminar – II**
COs	**After the successful completion of this course student will be able to:**
CO1	To Establish motivation for any topic of interest and develop a thought process for Technical presentation.
CO2	To Organize a detailed literature survey and build a document with respect to technical publications.
CO3	To perform Analysis and comprehension of available data
CO4	TO Make use of new and recent technology (e.g. Latex) for creating technical reports
CO5	Effective presentation and improve soft skill
Course code: BTCOF408	**Course name: Field Training / Internship / Industrial Training Evaluation**
COs	**After the successful completion of this course student will be able to:**
CO1	Integrate theory and practice.
CO2	Apply various soft skills such as time management, positive attitude and communication skills during performance of the tasks assigned in internship organization.
CO3	Determine the challenges and potential for his / her internship organization in particular and the sector in general.
CO4	Construct the company profile by compiling the brief history, management structure, products / services offered, key achievements and market performance for his / her organization of internship.