

**Department of Artificial Intelligence and Data Science**

Academic Year 2024-25

Semester- ODD

Structure of Course

Class	B. Tech. Sem. -III
Course Code and Course Title	BTAIES305 , Digital Logic & Signal Processing
Prerequisite/s	
Teaching Scheme: Lecture/Tutorial/Practical	03/00/00
Credits	3
Evaluation Scheme: CA/MSE/ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTAIES305_1	Use the basic logic gates and various reduction techniques of digital logic circuit in detail	L2
BTAIES305_2	Understand mathematical description and representation of various signals and systems.	L2
BTAIES305_3	Develop input output relationship for linear shift invariant system and understand the convolution operator for discrete time system.	L3
BTAIES305_4	Understand use of different transforms and analyze the discrete time signals and systems.	L2
BTAIES305_5	Understand the concept of correlation, regression and spectral density.	L2

Mapping of CO's with PO's and PSO's:

Course Outcomes	Programme Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO 1	PSO 2	PSO 3
BTAIES305_1	3	2	3	2	2					1		1	3		
BTAIES305_2	3	3	1							1		2	3		
BTAIES305_3	3	3	3	2	2					1			3	2	
BTAIES305_4	3	3	2	1						1		1	3	1	
BTAIES305_5	3	3								1			3		
Total	15	14	9	5	4					5		4	15	3	
Average	3	2.8	2.25	1.66	2					1		0.8	3	1.5	
BTAIES305	3	2.8	2.25	1.66	2					1		0.8	3	1.5	

CO Attainment Targets:

CO	305_1	305_2	305_3	305_4	305_5
Previous Attainment	3.0	3.0	3.0	3.0	3.0
Target for CAY	3.0	3.0	3.0	3.0	3.0

Prepared by
Course Coordinator

Verified by
Academic Coordinator

Approved by
HOD- AI & DS

HOD

Artificial Intelligence & Data Science Engg.

to become a leading AI & DS hub.

Data Science Engg.

Yashoda Technical Campus Satara

**Vision:**

Developing AI & DS applications that addresses regional challenges and empowering innovation and challenges, to become a leading AI & DS hub.

Mission:

M1: Emphasizing responsible AI development that considers social and environmental factors specific to the region.

M2: Educating the public about the potential benefits and responsible use of AI & DS technologies.

M3: Facilitating internships and research projects with AI & DS companies to bridge the gap between theory and practice.



**Artificial Intelligence & Data Science Department**

Academic Year 2024-25

Semester- ODD

Structure of Course

Class	B. Tech. Sem. –III
Course Code and Course Title	BTAIC302 An Introduction to Artificial Intelligence
Prerequisite/s	None
Teaching Scheme: Lecture/Tutorial/Practical	03/01/00
Credits	04
Evaluation Scheme: CA / MSE / ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTAIC302_1	Discuss Meaning, Scope and Stages of Artificial Intelligence	L1
BTAIC302_2	Understand and Implement Problem Space and Search Strategies for Solving problems.	L2
BTAIC302_3	Discuss the Search Techniques and Knowledge Representation.	L1
BTAIC302_4	Apply search for solving Constraint Satisfaction Problems and Game-playing.	L3
BTAIC302_5	Discover the Application of Artificial Intelligence and Analyze Impact of AI on Society	L4

Mapping of CO's with PO's and PSO's:

Course Outcomes	Programme Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO 1	PSO 2	PSO 3
BTAIC302_1	3	3	2									2	3	1	1
BTAIC302_2	3	3	2									2	3	1	1
BTAIC302_3	3	3	2									2	3	1	1
BTAIC302_4	3	3	2									2	3	1	1
BTAIC302_5	3	3	2									2	3	1	1
Total	15	15	10									10	15	5	5
Average	3	3	2									2	3	1	1
BTAIC302	3	3	2									2	3	1	1

CO Attainment Targets:

CO	302_1	302_2	302_3	302_4	302_4
Previous Attainment	NA	NA	NA	NA	NA
Target for CAY					



Prepared by Course Coordinator	Verified by Academic Coordinator	Approved by HOD- AI & DS
Vision of the Department Developing AI & DS applications that addresses regional challenges and empowering innovation and challenges, to become a leading rural AI & DS hub.		Mission of the Department M1: Emphasizing responsible AI development that considers social and environmental factors specific to the region. M2: Educating the public about the potential benefits and responsible use of AI & DS technologies. M3: Facilitating internships and research projects with AI & DS companies to bridge the gap between theory and practice.



Yashoda Shikshan Prsarak Mandal's

Yashoda Technical Campus

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Faculty of Engineering

Department of Artificial Intelligence and Data Science Engineering

Academic Year 2024-25 Semester- ODD

Structure of Course

Class	SY B.Tech. Sem. –III
Course Code and Course Title	BTAIC303 Data Structure and Algorithm Using Python
Prerequisite/s	
Teaching Scheme: Lecture/Tutorial/Practical	03/01/02
Credits	04
Evaluation Scheme: CA / MSE / ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTAIC303_1	Write programs using basic concepts of Python Programming	L3
BTAIC303_2	Implement algorithms for arrays, linked structures, stacks, queues, trees, and graphs	L3
BTAIC303_3	Write programs that use arrays, linked structures, stacks, queues, trees, and graphs	L3
BTAIC303_4	Compare and contrast the benefits of dynamic and static data structures implementation	L4
BTAIC303_5	Discuss the computational efficiency of the principal algorithms for sorting, searching, and hashing	L6

Mapping of CO's with PO's and PSO's:

Course Outcomes	Programme Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO 1	PSO 2	PSO 3
BTAIOE505C_1	1				3						3	3	3	3	1
BTAIOE505C_2	1										3	3	2	1	
BTAIOE505C_3	3	2		3							3	3	2	1	2
BTAIOE505C_4	3	2		3							3	3	1		1
BTAIOE505C_5	3	2		2							3	3	1	1	1
Total	11	6		8	3						14	14	10	6	5
Average	2.2	2		2.67	3						3	3	1.8	1.5	1.25
BTAIC303	2	2	3	3	3						3	2	2	2	1

Prepared by
Course Coordinator

Verified by
Academic Coordinator

Approved by
HOD



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Mission of the Department

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**Department of Artificial Intelligence and Data Science**

Academic Year 2024-25

Semester- ODD

Structure of Course

Class	B. Tech. Sem. –III
Course Code and Course Title	BTBS301 Engineering Mathematics - III
Prerequisite/s	
Teaching Scheme: Lecture/Tutorial/Practical	03/01/00
Credits	04
Evaluation Scheme: CA / MSE / ESE	20/20/60

Course Outcomes:

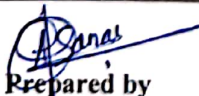
Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTBS301_1	CO1: Understand the concept & apply the concepts and properties of Laplace transformation	L2
BTBS301_2	CO2: Apply the concepts of inverse Laplace Transform with its property to solve Linear Differential Equation with given initial conditions.	L3
BTBS301_3	CO3: Solve problems related to Fourier transform, Laplace transform and applications to Communication systems and Signal processing	L3
BTBS301_4	CO4: Understand the concepts of PDE and application	L2
BTBS301_5	CO5: Analyze conformal mappings, transformations and perform contour integration of complex functions in the study of electrostatics and signal processing.	L4


Mapping of CO's with PO's and PSO's:

Course Outcomes	Programe Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO 1	PSO 2	PSO 3
BTBS301_1	3	2	2	2	1							1	3		1
BTBS301_2	3	3	2	2	1							1	3		1
BTBS301_3	3	3	3	2	1	1						1	3		1
BTBS301_4	3	3	2	2	1							1	3		1
BTBS301_5	3	3	2	2	2							1	3		1
Total	15	14	11	10	5	1						1	15		1
Average	3	2.8	2.2	2	1	1						1	3		1
BTBS301															

CO Attainment Targets:

CO	301_1	301_2	301_3	301_4	301_5
Previous Attainment	2.52	2.36	2.52	2.52	2.52
Target for CAY	3	3	3	3	3


Prepared by
Course Coordinator


Verified by
Academic Coordinator


Approved by
HOD- AI & DS



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Faculty of Engineering

Department of Computer Science and Engineering

Academic Year 2024-25

Semester- ODD

Structure of Course

Class :S.Y.BTech	B. Tech. Sem. – Odd
Course Code and Course Title	BTESC304: Computer Architecture and Operating Systems
Prerequisite/s	Operating System, process scheduling, Storage Management, deadlock, control unit
Teaching Scheme: Lecture/Tutorial/Practical	Lecture
Credits	03
Evaluation Scheme: CA / MSE / ESE	: CA / MSE / ESE

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTCOC 304_1	Understand the theory and architecture of central processing unit & Analyze some of the design issues in terms of speed, technology, cost, performance	L2
BTCOC 304_2	Use appropriate tools to design verify and test the CPU architecture & Learn the concepts of parallel processing, pipelining and inter processor communication.	L3
BTCOC 304_3	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	L3
BTCOC 304_4	Describe and explain the fundamental components of a computer operating system	L3
BTCOC 304_5	Define, restate, discuss, and explain the policies for scheduling, deadlocks, memory management, synchronization, system calls, and file systems.	

Mapping of CO's with PO's and PSO's:

Course Outcomes	Programme Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO 1	PSO 2	PSO 3
BTCOC 304_1	3	3			2								2		
BTCOC 304_2	3		2	3									1		
BTCOC 304_3	3	3	2										2		
BTCOC 304_4	3				2								2		
BTCOC 304_5		3	3										2		
Total	12	9	7	3	4								10		
Average	2.4	1.8	1.4	0.6	0.8								2.0		

Prepared by
Course CoordinatorVerified by
Academic CoordinatorApproved by
HOD- CSE**Vision of the Department**

To lead in technical, quality education, innovation, research for develop sustainable & inclusive technology for the society.

Mission of the Department

1. To create ambience of academic excellence through state of art infrastructure.
2. To create student-centric pedagogy that will lead to employability.
3. To create a software engineering professional with knowledge of multidisciplinary fields, can provide innovative products & service to society.
4. To train and motivate the students for **lifelong learning**, employability, and entrepreneurship

