



# Yashoda Technical Campus, Satara

(Approved by AICTE, Delhi /Approved by Govt of Maharashtra DTE)

Email: [principalengg\\_ytc@yes.edu.in](mailto:principalengg_ytc@yes.edu.in), Web : [www.yes.edu.in](http://www.yes.edu.in)

NH-4, wadhe, Satara, Tele Fax-02162-271238/39/9172220775



## Faculty of Engineering

### Department of Computer Science and Engineering

## Academic Year 2023-24

### Semester –IV (Second Year)

#### Structure of Course

Course Category	Course Code	Course Title	Weekly Teaching Hrs			Evaluation Scheme				Credit
			L	T	P	CA	MSE	ESE	Total	
	BTCOC401	Design & Analysis of Algorithms	3	1	-	20	20	60	100	4
	BTCOC402	Operating Systems	3	1	-	20	20	60	100	4
	BTHM403	Basic Human Rights	3	-	-	20	20	60	100	3
	BTBS404	Probability Theory and Random Processes	3	-	-	20	20	60	100	3
	BTES405	Digital Logic Design & Microprocessors	3	1	-	20	20	60	100	4
	BTCOL406	Operating Systems & Python Programming Lab	1*	-	4	60	-	40	100	3
	BTCOS407	Seminar – II			4	60	-	40	100	2
	BTCOF408	Field Training / Internship / Industrial Training Evaluation						-	-	Audit to be evaluated in V Sem.
<b>TOTAL</b>			<b>16</b>	<b>3</b>	<b>8</b>	<b>220</b>	<b>100</b>	<b>380</b>	<b>700</b>	<b>23</b>

**\*Note:** Lecture should be conducted only for Python Programming

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COs	Design & Analysis of Algorithms (BTCOC401)
BTCOC401_1	Understand the basic terminologies of algorithms & flowchart, Analyze the time complexity of a given algorithm
BTCOC401_2	Identify appropriate data structure as applied to specific problem domain and examine computational complexities
BTCOC401_3	Decide the appropriate design methodology for a given problem from among the paradigms of Divide & Conquer, Dynamic Programming, Greedy and Backtracking.
BTCOC401_4	Distinguish between P and NP classes of problems


CO to PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BTCOC401_1	3	3	2	3										1
BTCOC401_2	3	2	2	2									2	
BTCOC401_3	3	3	2	2									2	2
BTCOC401_4	3	3	3	3										
AVG	3	2.75	2.25	2.5									2	1.5

Correlation level 1,2,3 as defined below:


1 – Slight

2 – Moderate

3 – High

  
Course Coordinator



  
HOD  
H.O.D.  
Computer Science & Engg.  
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COs	Operating Systems (BTCOC402)
BTCOC402_1	Demonstrate various basic concepts related to OS
BTCOC402_2	Implement various CPU scheduling algorithm
BTCOC402_3	Describe the concepts of process synchronization and deadlock
BTCOC402_4	Distinguish between various memory management schemes, implement various page replacement algorithm
BTCOC402_5	Demonstrate I/O management and file system and implement disk scheduling algorithms.

CO to PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BTCOC401_1	3	3	2	3					1					1
BTCOC401_2	3	2	2	2					2				2	
BTCOC401_3	3	3	2	2					1				2	2
BTCOC401_4	3	3	3	3										
BTCOC401_5	3	3	3	3									3	2
<b>AVG</b>	<b>3</b>	<b>2.8</b>	<b>2.4</b>	<b>2.6</b>					<b>1.3</b>				<b>2.3</b>	<b>1.7</b>

Correlation level 1,2,3 as defined below:

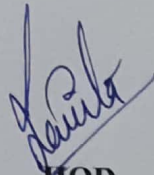
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COs	Basic Human Rights (BTHM403)
BTHM403_1	Identify and evaluate the historical, philosophical, political and cultural developments establishing human rights as a set of global norms, agreements and procedures.
BTHM403_2	Explore global human right institutions, law ,and processes and assess the impact of their interaction with national and local cultural practices and norms
BTHM403_3	Critically examine the impact of diverse geographic cultural and theoretical contexts on the social acceptance and practical application of human rights norms
BTHM403_4	Synthesize intredisciplinary appoches and contributions to topics such as gender, race, poverty, violence and post colonialism within a human rights

CO to PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BTCOC401_1								1	1					
BTCOC401_2								1	1					
BTCOC401_3								1	1					
BTCOC401_4								1	1					
AVG								1	1					

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COs	Probability Theory and Random Processes (BTBS404)
BTBS404_1	Understand the fundamental knowledge of the concepts of the probability
BTBS404_2	understand the basic concepts of one and two dimensionals random variables.
BTBS404_3	Apply the concept of random process in engineering decision
BTBS404_4	Apply the concept of correlation and spectral densities

CO to PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BTCOC404_1	2	1		1									2	
BTCOC404_2	1			1	1								2	
BTCOC404_3	1	1		1									2	
BTCOC404_4		1	1	1									2	
AVG	1.3	1	1	1	1								2	

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*J. H. Akke*

Course Coordinator



*H. O. J.*

HOD

H.O.J.

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COs	Digital Logic Design & Microprocessors (BTES405)
BTES405_1	Analyze combinational logic circuits, Simplification of algebraic equations using Karnaugh maps.
BTES405_2	Analyze Synchronous and Asynchronous Sequential Equation.
BTES405_3	Acquire the knowledge of fundamentals of microprocessor and microcontrollers architecture.
BTES405_4	Apply Knowledge and demonstrate programming proficiency using the various addressing modes of data transfer instructions.

CO to PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BTES405_1	3													
BTES405_2	1	2	3	3	3								3	3
BTES405_3	1	3	2	3	2								2	3
BTES405_4	3	1	3	1	2								1	3
AVG	2	2	2.67	2.33	2.33								2	3

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COs	Operating Systems & Python Programming Lab (BTCOL406)
BTCOL406_1	Demonstrate various basic concepts related to OS
BTCOL406_2	Implement various CPU scheduling algorithm
BTCOL406_3	To develop the programming skills in core Python & designing Graphical user Interfaces in Python
BTCOL406_4	To develop the ability to write database application in Python.

LO to PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BTEEL406_1	2	2	3	2	2								1	2
BTEEL406_2	2	3	3	3	3								1	2
BTEEL406_3	2	3	3	3	3								3	3
BTEEL406_4	3	3	3	3	3								3	3
<b>AVG</b>	<b>2.25</b>	<b>2.75</b>	<b>3</b>	<b>2.75</b>	<b>2.75</b>								<b>2</b>	<b>2.5</b>

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COs	Seminar – II (BTCOS407)
BTCOS407_1	Identify and Analyze recent topics of any domain
BTCOS407_2	Enhance technical writing skills
BTCOS407_3	Identify an engineering problem, analyze it and propose a work plan to solve it.
BTCOS407_4	Communicate with professional technical presentation skills and Apply modern documentation tools to write the report

CO to PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BTEEL407_1										1			1	
BTEEL407_2										2		2		1
BTEEL407_3	2						2	2						
BTEEL407_4										3		2		2
AVG	2						2	2		2		2	1	1.5

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1 – Slight

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3 – High

*DT*  
Course Coordinator



*Paula*  
HOD  
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