



# 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 –V (Third Year)

#### Structure of Course

Course Category	Course Code	Course Title	Weekly Teaching Hrs			Evaluation Scheme				Credit
			L	T	P	CA	MSE	ESE	Total	
	BTCOC501	Database Systems	3	1	-	20	20	20	100	4
	BTCOC502	Theory of Computation	3	1	-	20	20	20	100	4
	BTCOC503	Software Engineering	3	1	-	20	20	20	100	4
	BTCOE504	Elective – II (A) Human computer Interaction (B) Numerical Methods	3	-	-	20	20	20	100	3
	BTHM505	Elective – III (A) Economics and Management (B) Business Communication	3	-	-	20	20	20	100	3
	BTCOL506	Database Systems & Software Engineering Lab	-	-	4	60	-	40	100	2
	BTCOM507	Mini-project – I	-	-	4	60	-	40	100	2
	BTCOF408	Field Training / Internship / Industrial Training Evaluation	-	-	-	-	-	-	-	Audit
<b>TOTAL</b>			<b>15</b>	<b>3</b>	<b>8</b>	<b>220</b>	<b>100</b>	<b>380</b>	<b>700</b>	<b>22</b>

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COs	Database Systems (BTCOC501)
BTCOC501_1	Illustrate the concept of Database Management System.
BTCOC501_2	Explain Entity Relationship Diagrams apply the SQL, Relational Algebra and Relational Calculus queries.
BTCOC501_3	Illustrate concept of functional dependencies and determine normalization.
BTCOC501_4	Explain and Elaborate the concept of Transaction Processing, Concurrency control and Failure Recovery.

CO to PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BTCOC501_1	3	2	2	2									3	
BTCOC501_2	3	2	3	2									2	
BTCOC501_3	3	3	3	1										
BTCOC501_4	3	3	3	1										
<b>AVG</b>	<b>3</b>	<b>2.5</b>	<b>2.8</b>	<b>1.5</b>									<b>2.5</b>	

Correlation level 1,2,3 as defined below:


1 – Slight

2 – Moderate

3 – High

  
Course Coordinator



  
HOD  
H.O.U.  
Computer Science & Engg.  
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COs	Theory of Computation (BTCOC502)
BTCOC502_1	Outline the fundamental concepts in automata theory and formal languages
BTCOC502_2	Explain context-free grammars, properties of languages, grammars and automata with rigorously formal mathematical method.
BTCOC502_3	Differentiate and manipulate formal descriptions of push down automata, its applications and transducer machines
BTCOC502_4	Illustrate the basic properties of Turing machines and computing the tractability and decidability with Turing machine.

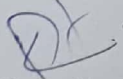
CO to PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BTCOC502_1	3	3		3	1							3	2	
BTCOC502_2	3	3	3									3		
BTCOC502_3	3	3	3	3								2		
BTCOC502_4	3	3	2	3								3	2	2
<b>AVG</b>	<b>3</b>	<b>3</b>	<b>2.7</b>	<b>3</b>	<b>1</b>							<b>2.8</b>	<b>2</b>	<b>2</b>

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COs	Software Engineering (BTCOC503)
BTCOC503_1	Able to define software engineering process and practices, and demonstrate various process models
BTCOC503_2	Able to identify different types of risks in software development
BTCOC503_3	Able to distinguish different testing strategies and it's working
BTCOC503_4	Able to Estimate the quality of software process & develop SRS document for project.

CO to PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BTCOC503_1	2	1	2			1							3	2
BTCOC503_2	2	2	1										2	1
BTCOC503_3	2	2	1										3	1
BTCOC503_4	2	2	1										2	2
<b>AVG</b>	<b>2</b>	<b>1.8</b>	<b>1.3</b>			<b>1</b>							<b>2.5</b>	<b>1.5</b>

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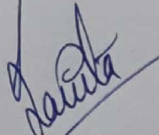
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COs	Human computer Interaction (BTCOE504)
BTCOE504_1	Acquire fundamental concepts of computer components functions regarding interaction with human and vice versa.
BTCOE504_2	Analyze interface problems to recognize what design approach and interaction styles is required in the light of usability standards and guidelines.
BTCOE504_3	Apply basic concepts to construct a user-interaction strategy for a given problem its usability evaluation functional deploying, effectual technologies in a range of circumstance and to meet desired needs within realistic world.
BTCOE504_4	Ability to design and develop an interface by using appropriate HCI techniques that are preferred by the user

CO to PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BTCOE504 (A)_1	3	2	2	3	1								2	2
BTCOE504 (A)_2	1	3	2	2									2	1
BTCOE504 (A)_3	2		3	2	3								3	3
BTCOE504 (A)_4	3			2	3								3	3
AVG	2.25	2.5	2.3	2.3	2.3								2.5	2.3

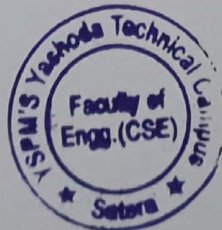
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COs	Business Communication (BTHM505B)
BTHM505B_1	Develop concept of communication and speaking skills.
BTHM505B_2	Develop the ways to improve personality, soft skills and organizational skills.
BTHM505B_3	Develop the thinking ability and expression improvement in group discussion.
BTHM505B_4	Design the effective resume as per industry requirement and be ready for personal interview through mock interviews and has knowledge of various interviews.

CO to PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BTCOE505B_1								2	2	3		2		1
BTCOE505B_2								2	2	3		2		2
BTCOE505B_3								2	2	3		2		2
BTCOE505B_4								1		3		1		2
<b>AVG</b>								<b>1.75</b>	<b>2</b>	<b>3</b>		<b>1.75</b>		<b>1.75</b>

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Cos	Database Systems & Software Engineering Lab (BTCOL506)
BTCOL506_1	Identify appropriate database schema for a given problem and design an E-R model for real world problem
BTCOL506_2	Implement a database, formulate quires using DDL, DML commands and various integrity constraints using SQL
BTCOL506_3	Discuss and Analyses how to develop software requirements specifications for a given problem.
BTCOL506_4	Understand and Describe basic concept of UML, design, implementation of test cases, DFD models, structure and behavior UML diagrams.

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BTCOL506_1	3	3	3	3	3			1	2		1	2	1	1
BTCOL506_2	3	3	3	3	3			1	2		1	2	1	1
BTCOL506_3	2	2	2	2	2	1		1	2		1	1	1	1
BTCOL506_4	2	2	2	2	2	1		1	2		1	1	1	1
<b>AVG</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>1</b>		<b>1</b>	<b>2</b>		<b>1</b>	<b>1.5</b>	<b>1</b>	<b>1</b>

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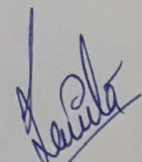
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COs	Mini-project – I (BTCOM507)
BTCOM507_1	Apply modern software tools to implement the software solution of the problem
BTCOM507_2	Apply modern software tools to implement the software solution of the problem
BTCOM507_3	Apply modern software tools to design test cases and perform testing of the implemented software solution and deploy the software solution after successful testing
BTCOM507_4	Communicate effectively by participating in various competitions, publishing and presenting project work through conference / journal paper

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BTCOM507_1	3	2	3	1		2			2	2	2	2	1	2
BTCOM507_2	1	2	3		3				2	1			1	
BTCOM507_3	2	2	2		2				2	1	1		2	1
BTCOM507_4	1	1	1	1	1	2				3	2	1	1	2
<b>AVG</b>	<b>1.8</b>	<b>1.8</b>	<b>2.3</b>	<b>1</b>	<b>2</b>	<b>2</b>			<b>2</b>	<b>1.8</b>	<b>1.7</b>	<b>1.5</b>	<b>1.3</b>	<b>1.7</b>

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