



**F.Y. Semester –I B. Voc (Data Analytics)  
Choice Based Credit Grading Scheme (CBCGS 2023)  
TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)**

Course Description			Teaching Scheme (Academic)					Examination scheme (Academic)				
Sr. No.	Course Code	Course Title	Modes of Teaching / Learning / Weightage					Modes of Continuous Assessment / Evaluation				
			Hours Per Week					Instruction Based Practice (100)		Practical/ Capstone project / Oral/ Presentation (25)	Term Work (25)	Total
			Hours Per Week			Contact Hours	Credits	50	50			
			Instruction Based Practice	Tutorial	Practical/ Capstone Project					Continuous Assessment (CA)	ESE	PR / OR
<b>General Education Component</b>												
1	BV- DA - GE11	IT Foundation & Programming Concepts	3	-	-	3	3	50	50	-	-	100
2	BV- DA - GE12	Programming in C	3	-	-	3	3	50	50	-	-	100
3	BV- DA - GE13	Presentation and Communication Skills	2	-	-	2	2	50	50	25(OR)	25	150
<b>Non Credit Course</b>												
1	BV- DA - NC11	Induction Training	2			2	-				25	25
		<b>Total</b>	<b>10</b>	<b>-</b>	<b>-</b>	<b>10</b>	<b>8</b>			<b>Total marks</b>		<b>375</b>
<b>Skill Component</b>												
5	BV- DA -SC11	C Programming Lab			4	4	2	-	-	25(PR)	25	50
6	BV- DA -SC12	Computer Assembling & Peripheral Installation	-	-	2	2	1	-	-	25(Oral)	25	50
8	BV- DA-SC13	Office Automation		-	8	8	4	-	-	25(PR)	25	50
9	BV- DA -SC14	Data Associate QP (SSC/Q0401)	2	-	6	8	5	-	-	-	50	50
		<b>Total</b>	<b>2</b>	<b>-</b>	<b>20</b>	<b>22</b>	<b>12</b>			<b>Total marks</b>		<b>200</b>
		<b>Total</b>	<b>12</b>	<b>-</b>	<b>20</b>	<b>32</b>	<b>20</b>			<b>Grand Total marks</b>		<b>575</b>

GE- General Education, S: Skill Component, CA: Continuous Assessment, ESE- End Semester Examination, PR- Practical Examination, TW – Term Work Examination, OR- Oral Examination



**F.Y. Semester –II B. Voc (Data Analytics)  
Choice Based Credit Grading Scheme (CBCGS 2023)  
TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)**

Course Description			Teaching Scheme (Academic)					Examination scheme (Academic)				
			Modes of Teaching / Learning / Weightage					Modes of Continuous Assessment / Evaluation				
Sr. No.	Course Code	Course Title	Hours Per Week					Instruction Based Practice (100)		Practical/ Capstone project / Oral/ Presentation (25)	Term Work (25)	Total
			Hours Per Week			Contact Hours	Credits	50	50			
			Instruction Based Practice	Tutorial	Practical/ Capstone Project					Continuous Assessment (CA)	ESE	
<b>General Education Component</b>												
1	BV- DA -GC21	Database Management System	3	-	-	3	3	50	50	-	-	100
2	BV- DA -GC22	Data Structures	3	-	-	3	3	50	50	-	-	100
3	BV- DA -GC23	Aptitude Building and Soft Skill Development	2	-	-	2	2	50	50	25(OR)	25	150
		<b>Total</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>8</b>	<b>8</b>	<b>Total marks</b>				<b>350</b>
<b>Skill Component</b>												
1	BV- DA -SC21	SQL for Data Analysis	-	-	2	2	1			25(PR)	25	50
2	BV- DA -SC22	Data Structures Lab	-	-	2	2	1			25(PR)	25	50
3	BV- DA -SC23	Web Development – Front End	-	-	6	6	3			25(PR)	25	50
4	BV- DA -SC24	Internship			4	4	2			-	50	50
5	BV- DA –SC25	Data Associate QP (SSC/Q0401)	2	-	6	8	5	-	100	-	-	100
		<b>Total</b>	<b>2</b>	<b>-</b>	<b>20</b>	<b>22</b>	<b>12</b>	<b>Total marks</b>				<b>300</b>
		<b>Total</b>	<b>10</b>		<b>20</b>	<b>30</b>	<b>20</b>	<b>Grand Total marks</b>				<b>650</b>

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**S.Y. Semester –III B. Voc (Data Analytics)  
Choice Based Credit Grading Scheme (CBCGS 2023)  
TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)**

Course Description			Teaching Scheme (Academic)					Examination scheme (Academic)				
			Modes of Teaching / Learning / Weightage					Modes of Continuous Assessment / Evaluation				
Sr. No.	Course Code	Course Title	Hours Per Week					Instruction Based Practice (100)		Practical/ Capstone project / Oral/ Presentation (25)	Term Work (25)	Total
			Hours Per Week			Contact Hours	Credits	50	50			
			Instruction Based Practice	Tutorial	Practical/ Capstone Project					Continuous Assessment (CA)	ESE	PR / OR
<b>General Education Component</b>												
1	BV- DA –GC31	Python Programming	3	-	-	3	3	50	50	-	-	100
2	BV- DA –GC32	Probability and Statistics for Data Analysis	2	-	-	2	2	50	50	-	-	100
3	BV- DA –GC33	Indian Knowledge System	3	-	-	3	3	50	50	-	-	100
		<b>Total</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>8</b>	<b>8</b>	<b>Total marks</b>				<b>300</b>
<b>Skill Component</b>												
5	BV- DA –SC31	Python Programming Lab	-	-	4	4	2	-	-	25(PR)	25	50
6	BV- DA –SC32	Linux Operating System Lab	-	-	2	2	1	-	-	25(PR)	25	50
7	BV- DA –SC33	Business Analytics with Excel	-	-	6	6	3	-	-	25(PR)	25	50
8	BV- DA –SC34	Python for Data Analysis Lab			4	4	2				25	50
9	BV- DA – SC35	Business Intelligence Analyst QP (SSC/Q8102)	2	-	4	6	4	-	-	-	50	50
		<b>Total</b>	<b>2</b>	<b>-</b>	<b>20</b>	<b>22</b>	<b>12</b>	<b>Total marks</b>				<b>250</b>
		<b>Total</b>	<b>10</b>	<b>-</b>	<b>20</b>	<b>30</b>	<b>20</b>	<b>Total marks</b>				<b>550</b>

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**S.Y. Semester –IV B. Voc (Data Analytics)  
Choice Based Credit Grading Scheme (CBCGS 2023)  
TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)**

Course Description			Teaching Scheme (Academic)					Examination scheme (Academic)				
Sr. No.	Course Code	Course Title	Modes of Teaching / Learning / Weightage					Modes of Continuous Assessment / Evaluation				
			Hours Per Week					Instruction Based Practice (100)		Practical/ Capstone project / Oral/ Presentation (25)	Term Work (25)	Total
						Contact Hours	Credits	50	50			
			Instruction Based Practice	Tutorial	Practical/ Capstone Project					Continuous Assessment (CA)	ESE	PR / OR
<b>General Education Component</b>												
1	BV- DA –GC41	R Programming	3	-	-	3	3	50	50	-	-	100
2	BV- DA –GC42	Data Warehousing and Mining	3	-	-	3	3	50	50	-	-	100
3	BV- DA –GC43	Descriptive Analytics	2	-	-	2	2	50	50	-	-	100
		<b>Total</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>8</b>	<b>8</b>	<b>Total marks</b>			<b>300</b>	
<b>Skill Component</b>												
4	BV- DA –SC41	R Programming Lab	-	-	4	4	2	-	-	25(PR)	25	50
5	BV- DA –SC42	NoSQL Lab	-	-	2	2	1	-	-	25(PR)	25	50
6	BV- DA –SC43	Descriptive Analytics Lab			2	2	1			25(PR)	25	50
7	BV- DA –SC44	Web and Social Media Analytics	-	-	4	4	2	-	-	25(PR)	25	50
8	BV- DA –SC45	Internship			4	4	2			-	50	50
9	BV- DA –SC46	Business Intelligence Analyst QP (SSC/Q8102)	2	-	4	6	4	-	100	-	-	100
		<b>Total</b>	<b>2</b>	<b>-</b>	<b>20</b>	<b>22</b>	<b>12</b>	<b>Total marks</b>			<b>350</b>	
<b>Total</b>			<b>10</b>	<b>-</b>	<b>20</b>	<b>30</b>	<b>20</b>				<b>650</b>	

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**T.Y. Semester –V B. Voc (Data Analytics)  
Choice Based Credit Grading Scheme (CBCGS 2023)  
TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)**

Course Description			Teaching Scheme (Academic)					Examination scheme (Academic)				
			Modes of Teaching / Learning / Weightage					Modes of Continuous Assessment / Evaluation				
Sr. No.	Course Code	Course Title	Hours Per Week					Instruction Based Practice (100)		Practical/ Capstone project / Oral/ Presentation (25)	Term Work (25)	Total
			Hours Per Week			Contact Hours	Credits	50	50			
			Instruction Based Practice	Tutorial	Practical/ Capstone Project					Continuous Assessment (CA)	ESE	PR / OR
<b>General Education Component</b>												
1	BV- DA –GC51	Machine Learning	3	-	-	3	3	50	50	-	-	100
2	BV- DA –GC52	Introduction to Predictive Analytics	3	-	-	3	3	50	50	-	-	100
3	BV- DA –GC53	Artificial Intelligence	2	-	-	2	2	50	50	-	-	100
		<b>Total</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>8</b>	<b>8</b>	<b>Total marks</b>				<b>300</b>
<b>Skill Component</b>												
4	BV- DA –SC51	Machine Learning Lab		-	4	4	2	50	50	25(PR)	25	25
5	BV- DA –SC52	Predictive Analytics Lab	-	-	2	2	1			25(PR)		50
6	BV- DA –SC53	Artificial Intelligence Lab	-		4	4	2			25(PR)	25	25
	BV- DA –SC54	Marketing and Retail Analytics			2	2	1				25	
7	BV- DA –SC55	Data Visualization using Tableau			6	6	3				25	50
8	BV-SD –SC56	Machine Learning Engineer (SSC/Q8113)-QP	1	-	4	5	3		100			100
		<b>Total</b>	<b>1</b>	<b>-</b>	<b>22</b>	<b>23</b>	<b>12</b>	<b>Total marks</b>				<b>1050</b>
<b>Total</b>			<b>9</b>	<b>-</b>	<b>22</b>	<b>31</b>	<b>20</b>	<b>Grand Total marks</b>				<b>1500</b>

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**T.Y. Semester –VI B. Voc (Data Analytics)  
Choice Based Credit Grading Scheme (CBCGS 2023)  
TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)**

Course Description			Teaching Scheme (Academic)					Examination scheme (Academic)				
Sr. No.	Course Code	Course Title	Modes of Teaching / Learning / Weightage					Modes of Continuous Assessment / Evaluation				
			Hours Per Week					Instruction Based Practice (100)		Practical/ Capstone project / Oral/ Presentation (25)	Term Work (25)	Total
			Hours Per Week			Contact Hours	Credits	50	50			
			Instruction Based Practice	Tutorial	Practical/ Capstone Project					Continuous Assessment (CA)	ESE	PR / OR
<b>General Education Component</b>												
1	BV- DA –GC61	Big Data Analytics	3	-	-	3	3	50	50	-	-	100
2	BV- DA –GC62	Text Analytics	3	-	-	3	3	50	50	-	-	100
3	BV- DA –GC63	Cloud Computing	2	-	-	2	2	50	50	-	-	100
		<b>Total</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>8</b>	<b>8</b>	<b>Total marks</b>			<b>300</b>	
<b>Skill Component</b>												
4	BV- DA –SC61	Big Data Analytics Lab	-	-	2	2	1			25(PR)	25	50
5	BV- DA –SC62	Text Analytics Lab	-	-	2	2	1			25(PR)	25	50
6	BV- DA –SC63	Cloud Computing Lab			2	2	1			25(PR)	25	50
7	BV- DA –SC64	Supply Chain and Logistics Analytics			4	4	2				25	25
8	BV- DA –SC65	Finance and Risk Analytics			4	4	2				25	25
9	BV-SD –SC66	Machine Learning Engineer (SSC/Q8113)-QP	1	-	6	7	5		100			100
		<b>Total</b>	<b>2</b>	<b>-</b>	<b>20</b>	<b>22</b>	<b>12</b>	<b>Total marks</b>			<b>300</b>	
		<b>Total</b>	<b>10</b>	<b>-</b>	<b>16</b>	<b>30</b>	<b>20</b>	<b>Grand Total marks</b>			<b>400</b>	

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**Final Year Semester –VII B. Voc (Data Analytics)  
Choice Based Credit Grading Scheme (CBCGS 2023)  
TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)**

Course Description			Teaching Scheme (Academic)					Examination scheme (Academic)				
Sr. No.	Course Code	Course Title	Modes of Teaching / Learning / Weightage					Modes of Continuous Assessment / Evaluation				
			Hours Per Week					Instruction Based Practice (100)		Practical/ Capstone project / Oral/ Presentation (25)	Term Work (25)	Total
			Hours Per Week			Contact Hours	Credits	50	50			
			Instruction Based Practice	Tutorial	Practical/ Capstone Project					Continuous Assessment (CA)	ESE	PR / OR
<b>General Education Component</b>												
		<b>Total</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>0</b>			<b>Total marks</b>		<b>-</b>
<b>Skill Component</b>												
1	BV- DA –SC71	Project on Marketing and Retail Analytics	-	-	8	8	4	-	-	50(OR)	50	100
2	BV- DA –SC72	Project on Supply Chain and Logistics Analytics	-	-	8	8	4	-	-	50(OR)	50	100
3	BV- DA –SC73	Project on Finance and Risk Analytics	-	-	8	8	4	-	-	50(OR)	50	100
4	BV- DA –SC74	Project on Healthcare	-	-	8	8	4	-	-	50(OR)	50	100
5	BV- DA –SC75	Project on E-Commerce	-	-	8	8	4	-	-	50(OR)	50	100
		<b>Total</b>	<b>0</b>	<b>-</b>	<b>40</b>	<b>40</b>	<b>20</b>			<b>Total marks</b>		<b>500</b>
		<b>Total</b>	<b>0</b>	<b>-</b>	<b>40</b>	<b>40</b>	<b>20</b>			<b>Grand Total marks</b>		<b>500</b>

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**Final Year Semester –VIII B. Voc (Data Analytics)  
Choice Based Credit Grading Scheme (CBCGS 2023)  
TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)**

Course Description			Teaching Scheme (Academic)					Examination scheme (Academic)					
			Modes of Teaching / Learning / Weightage					Modes of Continuous Assessment / Evaluation					
Sr. No.	Course Code	Course Title	Hours Per Week					Instruction Based Practice (100)		Practical/ Capstone Project /Oral/ Presentation (25)	Term Work (50)	Total	
			Hours Per Week			Contact Hours	Credits	50	50				
			Instruction Based Practice	Tutorial	Practical/ Capstone Project			Continuous Assessment (CA)	ESE	PR / OR	TW		
Course Description			Contact Hrs. during the Semester								Non-Grant Term Work (based on the presentation and Report)		
1	BV- DA –OJT1	On Job Training	-	-	-	600	20	-	-	-	100(OR)	200	300

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- The certification level will lead to Diploma/Advanced Diploma/B.Voc. Degree/ B.Voc with Honours in Data Analytics and will be offered by respective affiliating University/Board of Technical education.
- Students may be awarded Level Certificate/Diploma/Advance Diploma/degree as outlined in the table below.

Award	Duration after class XII	Corresponding NSQF Level/OJT
Diploma	1 Year	5
Advanced Diploma	2 Year	6
B.Voc. Degree	3 Year	7
B.Voc. Degree with Honours	4 Year	OJT



*Tagdu Singh Charitable Trust's (Regd.)*

## **THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY**

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