SCHEME OF TEACHING AND EXAMINATION
FIRST YEAR B. TECH. (DATA SCIENCE)
SEMESTER- I (Chemistry Group)

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks	Evaluation Scheme (Marks)					
									Theory			Practical		
				L	T	P	Credits		Scheme	Max marks	Min. Passing	Scheme	Max marks	Min. Passing
1			Applied Mathematics-I	3	-	-	03	100						
2			Applied Chemistry	3	-	-	03	100						
3			Computer Programming in C	3	-	-	03	100						
4			Engineering Mechanics	3	-	-	03	100						
5			Fundamental of electronics and Electrical	3	-	-	03	100						
6			Social Innovation	-	1	2	02	50						
7			Applied Mathematics-I	-	1	-	01	25						
8			Applied Chemistry Lab	-	-	2	01	25						
9			Computer Programming in C Lab	-	-	2	01	25						
10			Engineering Mechanics Lab	-	-	2	01	25						
11			Fundamental of electronics and Electrical Lab	-	-	2	01	25						
12			Workshop Practice Lab-I	-	-	2	01	50						
13			Foreign language (German/Japanese/ Russian) (Non Credit)	1	-	-	-	100						
14			Democracy, Election & Good Governance (Non Credit Mandatory Course)*											
			Total	16	2	12	23	825						

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.

2) ESE will be conducted for 100 marks and converted to 50 marks.

ISE: In Semester Evaluation   **MSE: Mid Semester Evaluation**   **ESE: End Semester Evaluation**

SCHEME OF TEACHING AND EXAMINATION
FIRST YEAR B. TECH. (DATA SCIENCE)
SEMESTER- II (Physics Group)

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks	Evaluation Scheme (Marks)					
									Theory			Practical		
				L	T	P	Credits		Scheme	Max marks	Min. Passing	Scheme	Max marks	Min. Passing
1			Applied Mathematics-II	3	-	-	03	100						
2			Applied Physics	3	-	-	03	100						
3			Object oriented Programming	3	-	-	03	100						
4			Engineering Drawing	2	-	-	02	100						
5			Engineering Exploration	-	-	4	02	100						
6			Professional Communication	2	-	-	02	100						
7			Applied Mathematics-II	-	1	-	01	25						
8			Applied Physics Lab	-	-	2	01	25						
9			Object oriented Programming Lab	-	-	2	01	25						
10			Engineering Drawing Lab	-	-	4	02	25						
11			Professional; Communications Lab	-	-	2	01	25						
12			Workshop Practice Lab-II	-	-	2	01	50						
			Total	13	1	16	22	775						

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.

2) ESE will be conducted for 100 marks and converted to 50 marks.

ISE: In Semester Evaluation   **MSE: Mid Semester Evaluation**   **ESE: End Semester Evaluation**

SCHEME OF TEACHING AND EXAMINATION
FIRST YEAR B. TECH. (DATA SCIENCE)
SEMESTER- I (Physics Group)

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks	Evaluation Scheme (Marks)					
									Theory			Practical		
				L	T	P	Credits		Scheme	Max marks	Min. Passing	Scheme	Max marks	Min. Passing
1			Applied Mathematics-I	3	-	-	03	100						
2			Applied Physics	3	-	-	03	100						
3			Computer Programming in C	3	-	-	03	100						
4			Engineering Drawing and Design	3	-	-	03	100						
5			Social Innovation	-	1	2	02	50						
6			Professional Communication	2	-	-	02	100						
7			Applied Mathematics-I	-	1	-	01	25						
8			Applied Physics Lab	-	-	2	01	25						
9			Engineering Drawing and Design lab	-	-	2	01	25						
10			Computer Programming in C Lab	-	-	2	01	25						
11			Professional Communication Lab	-	-	2	01	25						
12			Workshop Practice -I	-	-	2	01	50						
13			Foreign language (German/Japanese/ Russian) (Non Credit)	1	-	-	-	100						
14			Democracy, Election & Good Governance (Non Credit Mandatory Course)*											
			Total	16	2	12	23	825						

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.

2) ESE will be conducted for 100 marks and converted to 50 marks.

ISE: In Semester Evaluation   **MSE: Mid Semester Evaluation**   **ESE: End Semester Evaluation**

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SCHOOL OF ENGINEERING AND TECHNOLOGY
SCHEME OF TEACHING AND EXAMINATION
FIRST YEAR B. TECH. (DATA SCIENCE)
SEMESTER- II (Chemistry Group)

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks	Evaluation Scheme (Marks)					
									Theory			Practical		
				L	T	P	Credits		Scheme	Max marks	Min. Passing	Scheme	Max marks	Min. Passing
1			Applied Mathematics-I	3	-	-	03	100						
2			Applied Chemistry	3	-	-	03	100						
3			Object Oriented Programming	3	-	-	03	100						
4			Engineering Mechanics	3	-	-	02	100						
5			Fundamental of electronics and Electrical	3	-	-	02	100						
6			Engineering Exploration	-	-	4	02	50						
7			Applied Mathematics-II	-	1	-	01	25						
8			Applied Chemistry Lab	-	-	2	01	25						
9			Object Oriented Programming Lab	-	-	2	02	25						
10			Engineering Mechanics Lab	-	-	2	01	25						
11			Fundamental of electronics and Electrical Lab	-	-	2	01	25						
12			Workshop Practice -II	-	-	2	01	50						
			Total	15	1	14	23	825						

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.

2) ESE will be conducted for 100 marks and converted to 50 marks.

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SCHEME OF TEACHING AND EXAMINATION
SECOND YEAR B. TECH. (DATA SCIENCE) SEMESTER- III

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks	Evaluation Scheme (Marks)					
									Theory			Practical		
				L	T	P	Credits		Scheme	Max marks	Min. Passing	Scheme	Max marks	Min. Passing
1			Applied Mathematics for Data Science	3			03	100						
2			Introduction of Data Mining and Analytics	3			03	100						
3			Statistics for Data Analytics and Science	3			03	100						
4			Computer Networks for Data Science	3			03	100						
5			R Programming Basics Level 1	2			02	100						
6			Statistic Lab -IBM SPSS			2	01	75						
7			R Programming Lab			2	01	50						
8			Computer Networks - Lab			2	01	25						
9			Environmental studies	2										
			Total	16		3	19	750						

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.

2) ESE will be conducted for 100 marks and converted to 50 marks.

ISE: In Semester Evaluation **MSE: Mid Semester Evaluation** **ESE: End Semester Evaluation**

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SCHOOL OF ENGINEERING AND TECHNOLOGY
SCHEME OF TEACHING AND EXAMINATION
SECOND YEAR B. TECH. (DATA SCIENCE) SEMESTER- IV

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks	Evaluation Scheme (Marks)					
									Theory			Practical		
				L	T	P	Credits		Scheme	Max marks	Min. Passing	Scheme	Max marks	Min. Passing
1			Advanced R Programming	3			03	100						
2			Advanced Statistics for Data Science	3			03	100						
3			Data Science with ML	3	1		04	100						
4			Software Engineering	3			03	100						
5			Programming using Python	2		4	04	100						
6			Advanced Statistic for Data Science Lab			2	01	75						
7			Advanced R Programming Lab			2	01	75						
8			Project- I			2	01	75						
9			Soft Skill			2	01	50						
10			Risk Management	3										
			Total	17	1	6	21	775						

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.
2) ESE will be conducted for 100 marks and converted to 50 marks.

ISE: In Semester Evaluation   **MSE: Mid Semester Evaluation**   **ESE: End Semester Evaluation**

Summer Internship

The students are expected to undergo 4 to 6 weeks internship in the industry and work on the relevant area as assigned by the Industry. The work done should be monitored and evaluated by the concerned industry expert based on the report prepared by the student. The department has to assign faculty mentors to a student who has to communicate with the industry and monitor the entire internship related work periodically.

a) Industry expert/ supervisor: - 70%   b) Department & Faculty mentor: - 30%

Faculty mentor includes presentation and submission of report to the department at the beginning of the subsequent semester.

1) The internship can be availed by the students during the summer vacations after completion of semester IV or VI.2) The credits of the internships will be considered in semester VII.

3) The industry experts/ supervisor are expected to assign the work worth minimum 100 to 120 hours for 4 weeks duration and should monitor and evaluate periodically.

4) At the completion of internship work the student is expected to prepare a report on the work done and get a certificate from the industry expert.

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SCHEME OF TEACHING AND EXAMINATION
THIRD YEAR B. TECH. (DATA SCIENCE) SEMESTER- V

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks	Evaluation Scheme (Marks)						
									Theory			Practical		
				L	T	P	Credits		Scheme	Max marks	Min. Passing	Scheme	Max marks	Min. Passing
1			Data Visualization	3			03	100						
2			Database Management System with SQL for Data Science	3			03	100						
3			Professional Elective-I	3			03	100						
4			Professional Elective-II	3	1		04	100						
5			Advanced Python Programming	2		4	04	100						
6			Database Management System with SQL for Data Science Lab			2	01	75						
7			Data Visualization Lab			2	01	75						
8			Project- II			2	01	75						
9			Information Management System	3										
			Total	17	1	5	20	725						

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.

2) ESE will be conducted for 100 marks and converted to 50 marks.

ISE: In Semester Evaluation   **MSE: Mid Semester Evaluation**   **ESE: End Semester Evaluation**

Professional Elective-I   **Professional Elective-II**
1. Text Analytics   1. Advanced Data Mining Techniques
2. Image Processing and Pattern Recognition   2. Cloud Computing for Data Analytics

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THIRD YEAR B. TECH. (DATA SCIENCE) SEMESTER- VI

Sr. No.	Cours e Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks	Evaluation Scheme (Marks)					
				L	T	P	Credits		Theory			Practical		
									Scheme	Max marks	Min. Passing	Scheme	Max marks	Min. Passing
1			Data Mining using MATLAB	3			3	100						
2			Image Processing and Pattern Recognition- Visual Analytics	3			3	100						
3			Recommender System for R Programming	3			3	100						
4			Professional Elective-III	3			3	100						
5			Open Elective-I	3	1		4	100						
6			Recommender System for R Programming Lab				2	75						
7			Image Processing and Pattern Recognition- Visual Analytics Lab				1	75						
8			Data Mining using MATLAB Lab				1	50						
9			Project- III				2	75						
			Total	15	1	6	22	775						

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.
2) ESE will be conducted for 100 marks and converted to 50 marks.

ISE: In Semester Evaluation   **MSE: Mid Semester Evaluation**   **ESE: End Semester Evaluation**

Professional Elective-III   **Open Elective I**
1. Data Preparation   2.   1. Innovation Management
Google Developers R Programming   2. Legal Aspects of Business

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SCHEME OF TEACHING AND EXAMINATION
FINAL YEAR B. TECH. (DATA SCIENCE) SEMESTER- VII

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks	Evaluation Scheme (Marks)					
				L	T	P	Credits		Theory			Practical		
									Scheme	Max marks	Min. Passing	Scheme	Max marks	Min. Passing
1			Time Series, Forecasting and Index Number for Data Analytics	3			3	100						
2			Advanced ML for Data Science	3			3	100						
3			Professional Elective-IV	3			3	100						
4			Open Elective-II	3	1		4	100						
5			Time Series, Forecasting and Index Number for Data Analytics Lab			2	1	75						
6			Advanced ML for Data Science Lab			2	1	75						
7			Project- IV			4	2	150						
8			Internship				4							
9														
				12	1	4	21	700						

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.
2) ESE will be conducted for 100 marks and converted to 50 marks.
ISE: In Semester Evaluation   MSE: Mid Semester Evaluation   ESE: End Semester Evaluation
Professional Elective IV: 1. Analyzing Big Data with Microsoft R Server   2. Analyzing Big Data in R using Apache Spark
Open Elective-II: 1.Enterprise Solution   2. Using System and tools in Projects

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FINALYEAR B. TECH. (DATA SCIENCE) SEMESTER- VIII

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks	Evaluation Scheme (Marks)					
									Theory			Practical		
				L	T	P	Credits		Scheme	Max marks	Min. Passing	Scheme	Max marks	Min. Passing
1			Machine & Deep Learning	3			3	100						
2			Advanced Recommendation System	3			3	100						
3			Professional Elective-V	3			3	100						
4			Professional Elective-VI	3			4	100						
5			Deep Learning Lab			4	2	75						
6			Community Services			2	1	50						
7			Project-V			4	2	150						
			TOTAL	12	1	5	18	750						

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.

2) ESE will be conducted for 100 marks and converted to 50 marks.

ISE: In Semester Evaluation   **MSE: Mid Semester Evaluation**   **ESE: End Semester Evaluation**

Professional Elective V: 1. Natural Processing Analytics   2. Behavior Analytics

Professional Elective VI: 1. Multivariate Analysis   2. Reinforcement Learning Python