



**Adamas University**  
**School of Basic and Applied Sciences**  
**Department of Mathematics**

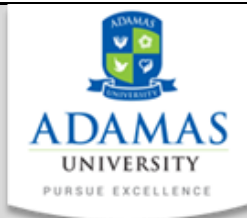
Programme Structure of

**M.Sc. Tech (Statistics and Data Science)**

Programme Code: MTH4402

Duration: 2 Years Full Time

Academic Year: 2024-25



**SCHOOL OF BASIC AND APPLIED SCIENCES**

**M.Sc. Tech. (Statistics and Data Science)**

**SEMESTER I**

SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS	
				L	T	P	C		
1	CORE	SDS21096	Probability Theory and Distributions	3	1	0	4		
2	CORE	MTH23071	Problem Solving and Applications	2	1	0	3		
3	CORE	MTH21109	Linear Algebra	3	1	0	4		
4	CORE	SDS21049	Applied Statistics I	3	1	0	4		
5	CORE	SDS22093	Applied Statistics I Lab	0	0	4	2		
6	CORE	MTH21110	Calculus and Optimization	3	1	0	4		
7	CORE	SDS23097	Data Analysis and Visualization with Python	2	0	4	4		
			<b>TOTAL CREDIT</b>					<b>25</b>	

**SEMESTER II**

SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS	
				L	T	P	C		
8	CORE	SDS21098	Sampling Theory	2	1	0	3		
9	CORE	SDS21058	Machine Learning and Applications	3	1	0	4		
10	CORE	SDS22059	Machine Learning and Applications Lab	0	0	4	2		
11	CORE	SDS21050	Statistical Inference	3	1	0	4		
12	CORE	SDS21052	Applied Statistics II	3	1	0	4		
13	CORE	SDS22094	Applied Statistics II Lab	0	0	4	2		
14	CORE	CSE21741	Data Structures and Algorithm design	3	1	0	4		
15	CORE	CSE22742	Data Structures and Algorithm design Lab	0	0	4	2		
			<b>TOTAL CREDIT</b>					<b>25</b>	

### SEMESTER III

SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS	
				L	T	P	C		
16	CORE	SDS23099	Statistical Techniques in Data Mining	3	0	2	4		
17	CORE	SDS21051	Mathematical and Stochastic Modelling	3	1	0	4		
18	CORE	MTH23111	Numerical Techniques	3	0	2	4		
19	CORE	CSE21745	Database Management System with SQL	3	1	0	4		
20	CORE	CSE22746	Database Management System with SQL Lab	0	0	4	2		
21	CORE		Optional I	3	1	0	4		
22	CORE	SDS24060	Summer Internship (Industry/Institute visit)	0	0	0	2		
23	CORE	SDS24061	Minor project	0	0	0	2		
			<b>TOTAL CREDIT</b>					<b>26</b>	

### SEMESTER IV

SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS	
				L	T	P	C		
24	CORE	CSE21751	Artificial Intelligence and Applications	3	1	0	4		
25	CORE	SDS21043	Stochastic Process	3	1	0	4		
26	CORE		Optional II	3	1	0	4		
27	CORE	SDS25068	Project/Dissertation & Viva-voce	-	-	-	12		
			<b>TOTAL CREDIT</b>					<b>24</b>	
			<b>TOTAL REQUIRED CREDIT</b>					<b>100</b>	

**OPTIONAL PAPERS:**

Students are required to study **TWO** Optional Papers either from Group A or Group B during semesters III and IV. The list of the electives is given below:

<b>List of Optional Papers</b>		
<b>Options</b>	<b>Paper Name</b>	<b>Paper Code</b>
<b>Optional I</b>	Survival Analysis (Group A)	SDS21100
	Statistical Quality Control (Group A)	SDS21101
	Cryptography and Network Security (Group B)	CSE21749
	Cloud Computing (Group B)	CSE21752
<b>Optional II</b>	Clinical Trials and Biostatistics (Group A)	SDS21102
	Demography (Group A)	SDS21103
	Big Data Analytics (Group B)	SDS21062
	Cyber Security for Data Science (Group B)	CSE21750
	Deep Learning and Its Applications (Group B)	SDS21064

**\*Offering of optional papers may vary from year to year as per choice of Students or availability of resource person.**