



Adamas University  
School of Basic and Applied Sciences  
Department of Mathematics

Programme Structure of  
**B.Sc (Statistics and Data Analytics)**

Programme Code: MTH3402

Duration: 4 Years Full Time

Academic Year: 2023-24

SEMESTER I								
SL. No	Type of Course	Code	Title of the Course	Contact Hours Per Week				Remarks
				L	T	P	C	
1	CC	SDS101	Probability Theory	3	1	0	4	CC-1
2	CC	SDS102	Descriptive Statistics	3	0	2	4	CC-2
3	MDC						3	
4	AEC						3	
5	Minor						4	
6	VAC						2	
<b>Total Semester Credit</b>							<b>20</b>	
SEMESTER II								
SL. No	Type of Course	Code	Title of the Course	Contact Hours Per Week				Remarks
				L	T	P	C	
7	CC	SDS103	Probability distribution	3	0	2	4	CC-3
8	CC	SDS104	Sampling theory	3	0	2	4	CC-4
9	MDC						3	
10	SEC						2	
11	VAC						2	
12	AEC						3	
13	Minor						4	
<b>Total Semester Credit</b>							<b>22</b>	
SEMESTER III								
SL. No	Type of Course	Code	Title of the Course	Contact Hours Per Week				Remarks
				L	T	P	C	
14	CC	SDS201	Statistical Inference	3	0	2	4	CC-5
15	CC	SDS202	Linear Algebra and Multivariate Analysis	3	0	2	4	CC-6
16	MDC						3	
17	Minor						4	
18	AEC						2	
19	SEC						2	
20	VAC						2	
<b>Total Semester Credit</b>							<b>21</b>	

SEMESTER IV								
SL. No	Type of Course	Code	Title of the Course	Contact Hours Per Week				Remarks
				L	T	P	C	
21	CC	SDS203	Exploratory Data Analysis and Visualization	3	0	2	4	CC-7
22	CC	MTH204	Introduction to Linear Programming and Game Theory	3	1	0	4	CC-8
23	CC	SDS205	Data Analytics Principles and Techniques	3	0	2	4	CC-9
24	SEC						2	
25	Minor						4	
26	VAC						2	
<b>Total Semester Credit</b>							<b>20</b>	
SEMESTER V								
SL. No	Type of Course	Code	Title of the Course	Contact Hours Per Week				Remarks
				L	T	P	C	
27	CC	SDS301	Linear Models	3	0	2	4	CC-10
28	CC	SDS302	Elementary Data Science	3	0	2	4	CC-11
29	CC	SDS303	Index Numbers and Time Series Analysis	3	0	2	4	CC-12
30	Minor						4	
31	SEC						2	
31	INT	SDS350	Internship (Summer Project)				4	
<b>Total Semester Credit</b>							<b>22</b>	
SEMESTER VI								
SL. No	Type of Course	Code	Title of the Course	Contact Hours Per Week				Remarks
				L	T	P	C	
32	CC	SDS304	Survey Sampling	3	0	2	4	CC-13
33	CC	SDS305	Applied Machine Learning	3	0	2	4	CC-14
34	CC	SDS306/ SDS307	Database management System/Quantitative Methods for Finance	3	0	2	4	CC-15
35	Minor						4	
36	SEC						2	
37	Project	SDS351	Project				4	
<b>Total Semester Credit</b>							<b>22</b>	
<b>Total Credit After 3<sup>rd</sup> Year</b>							<b>127</b>	

SEMESTER VII								
SL. No	Type of Course	Code	Title of the Course	Contact Hours Per Week				Remarks
				L	T	P	C	
38	CC	SDS401	Stochastic Processes & Queuing Theory	3	1	0	4	CC-16
39	CC	SDS402/ SDS403	Advanced Machine Learning and Applications/ Pricing, Hedging and Optimization	3	0	2	4	CC-17
40	CC	SDS404	Design of Experiments	3	0	2	4	CC-18
41	CC (For With research)	MTH450	Research Methodology	3	1	0	4	CC-19 (Research)
42	CC (For Without research)	SDS451/ SDS452	Statistical Quality Control / Data Analytics for Finance	3	0	2	4	CC-19 (without Research)
43	Minor						4	
<b>Total Semester Credit</b>							<b>2</b>	<b>0</b>
SEMESTER VIII								
S.No	Type of Course	Code	Title of the Course	Contact Hours Per Week				Remarks
				L	T	P	C	
44	CC	SDS405	Artificial Neural Network	3	0	2	4	CC-20
45	CC (For Without research)	SDS453/ SDS54	Data Engineering / Practical Financial Econometrics	3	0	2	4	CC-21 (without Research)
46	CC (For Without Research)	SDS455	Data Management and Data Warehousing	3	0	2	4	CC-22 (without Research)
47	Minor						4	
48	Minor (For without research)						4	
49	Dissertation	SDS499	Project/Dissertation	12	0	0	1 2	
<b>Total Semester Credit</b>							<b>2</b>	<b>0</b>
<b>Total Credit After 4<sup>th</sup> Year</b>							<b>167</b>	

\*NOTE: With research is only allowed for Students *who secure 75% marks and above in the first six semesters*