



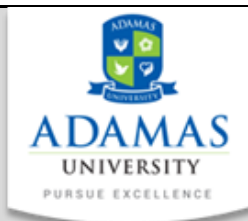
ADAMAS UNIVERSITY
SCHOOL OF BASIC AND APPLIED
SCIENCES

DEPARTMENT OF MATHEMATICS

B.SC. (HONS) STATISTICS AND DATA
ANALYTICS
(MTH3304)

COURSE STRUCTURE

EFFECTIVE FROM: AY 2022-23



SCHOOL OF BASIC AND APPLIED SCIENCES

B.Sc. (Hons) Statistics and Data Analytics

SEMESTER I

SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS
				L	T	P	C	
1	CORE	MTH11033	CALCULUS	3	0	0	3	
2		SDS11072	PROBABILITY THEORY	2	1	0	3	
3		SDS11001	DESCRIPTIVE STATISTICS	3	1	0	4	
4		SDS12002	DESCRIPTIVE STATISTICS PRACTICAL	0	0	3	2	
5	FOUNDATION	ENG11057	ENGLISH LANGUAGE AND LITERATURE	2	0	0	2	
6	GEN. ELECTIVE		ELECTIVE (THEORY)	3	1	0	4	
7			ELECTIVE (PRACTICAL)	0	0	3	2	
8	VALUE ADDED COURSES	DGS11001	DESIGN THINKING	2	0	0	2	
TOTAL CREDIT							22	

[OPTIONS: **ELECTIVE PROGRAMMING LANGUAGE I (CSE11655)**, **ELECTIVE PROGRAMMING LANGUAGE I LAB (CSE12656)**, **ELECTIVE CHEMISTRY I (CHM11151)** & **ELECTIVE CHEMISTRY I LAB (CHM12152)**]

* For non-lab based subjects total credit will be 6 for one paper (e.g., Economics, L-T-P: 5-1-0)

SEMESTER II

SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS
				L	T	P	C	
9	CORE	SDS11073	PROBABILITY DISTRIBUTIONS	2	1	0	3	
10		SDS12074	PROBABILITY DISTRIBUTIONS PRACTICAL	0	0	3	2	
11		MTH11034	REAL ANALYSIS	3	0	0	3	
12		MTH11080	LINEAR ALGEBRA	3	1	0	4	
13	FOUNDATION	EVS11112	ENVIRONMENTAL SCIENCE	2	0	0	2	
14	GEN. ELECTIVE		ELECTIVE (THEORY)	3	1	0	4	
15			ELECTIVE (PRACTICAL)	0	0	3	2	
16	VALUE ADDED COURSES	EIC11001	VENTURE IDEATION	2	0	0	2	
TOTAL CREDIT							25	

[OPTIONS: **ELECTIVE PROGRAMMING LANGUAGE II (CSE11657)**, **ELECTIVE PROGRAMMING LANGUAGE II LAB (CSE12658)**, **ELECTIVE CHEMISTRY II (CHM11153)** & **ELECTIVE CHEMISTRY LAB II (CHM12154)**]

* For non-lab based subjects total credit will be 6 for one paper (e.g., Economics, L-T-P: 5-1-0)

SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS
				L	T	P	C	
17	CORE	SDS11075	SAMPLING THEORY	2	1	0	3	
18		SDS11076	STATISTICAL INFERENCE	3	1	0	4	
19		SDS12077	STATISTICAL INFERENCE PRACTICAL	0	0	3	2	
20		SDS11078	INDEX NUMBERS AND TIME SERIES ANALYSIS	3	1	0	4	
21		SDS12079	INDEX NUMBERS AND TIME SERIES ANALYSIS PRACTICAL	0	0	3	2	
22	SKILL ENHANCEMENT COURSE (SEC)	SDS13080	R-PROGRAMMING	1	0	3	3	
23	GEN. ELECTIVE		ELECTIVE (THEORY)	3	1	0	4	
24			ELECTIVE (PRACTICAL)	0	0	3	2	
25	VALUE ADDED COURSES	SOC14100	COMMUNITY SERVICE	0	0	1	1	
26	VALUE ADDED COURSES	IDP14001	INTER-DISCIPLINARY PROJECT	0	0	3	3	
			TOTAL CREDIT				28	

[OPTIONS: MICROECONOMICS (ECO11001)*, ELECTIVE PHYSICS I (PHY11015) & ELECTIVE PHYSICS LAB I (PHY12016)]

* For non-lab based subjects total credit will be 6 for one paper (e.g., Economics, L-T-P: 5-1-0)

SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS
				L	T	P	C	
27	CORE	SDS11005	LINEAR MODELS	3	1	0	4	
28		SDS12006	LINEAR MODELS PRACTICAL	0	0	3	2	
29		CSE11646	DATABASE MANAGEMENT SYSTEM	3	1	0	4	
30		CSE12647	DATABASE MANAGEMENT SYSTEM PRACTICAL	0	0	3	2	
31		MTH11035	DISCRETE MATHEMATICS	3	0	0	3	
32	SKILL ENHANCEMENT COURSE (SEC)	SDS13081	PYTHON FOR DATA SCIENCE	1	0	3	3	
33	GEN. ELECTIVE		ELECTIVE (THEORY)	3	1	0	4	
34			ELECTIVE (PRACTICAL)	0	0	3	2	
35	VALUE ADDED COURSES	PSG11021	HUMAN VALUES AND PROFESSIONAL ETHICS	2	0	0	2	
			TOTAL CREDIT				26	

[OPTIONS: MACROECONOMICS (ECO11031)*, ELECTIVE PHYSICS II (PHY11024) & ELECTIVE PHYSICS II LAB (PHY12025)]

* For non-lab based subjects total credit will be 6 for one paper (e.g., Economics, L-T-P: 5-1-0)

SEMESTER V								
SL. NO.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS
				L	T	P	C	
36	CORE	MTH11036	OPERATIONS RESEARCH	3	1	0	4	
37		SDS11020	DESIGN OF EXPERIMENTS AND MULTIVARIATE ANALYSIS	3	1	0	4	
38		SDS12021	DESIGN OF EXPERIMENTS AND MULTIVARIATE ANALYSIS PRACTICAL	0	0	3	2	
39		CSE11650	INTRODUCTION TO MACHINE LEARNING	3	1	0	4	
40		CSE12651	INTRODUCTION TO MACHINE LEARNING PRACTICAL	0	0	3	2	
41		SDS11015	EXPLORATORY DATA ANALYSIS AND VISUALIZATION	3	1	0	4	
42		SDS12083	EXPLORATORY DATA ANALYSIS AND VISUALIZATION PRACTICAL	0	0	3	2	
43	ELECTIVE		DSE I	3	1	0	4	
44		SDS14039	SUMMER INTERNSHIP	-	-	-	2	
			TOTAL CREDIT				28	
SEMESTER VI								
SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS
				L	T	P	C	
45	CORE	SDS11084	INTRODUCTION TO DATA MINING	3	1	0	4	
46	CORE	SDS12085	INTRODUCTION TO DATA MINING PRACTICAL	0	0	3	2	
47	CORE	MTH11081	INTRODUCTION TO DECISION SCIENCE	3	1	0	4	
48	ELECTIVE	-	DSE II	3	1	0	4	
49	ELECTIVE	-	DSE III (THEORY)	3	1	0	4	
50	ELECTIVE		DSE III (PRACTICAL)	0	0	3	2	
51		SDS15091	PROJECT WORK	-	-	-	8	
			TOTAL CREDIT				28	
			TOTAL (REQUIRED CREDIT)	154				

LIST OF 'DISCIPLINE SPECIFIC ELECTIVE PAPERS (DSE)' OFFERED BY THE DEPT. OF MATHEMATICS:

List of Elective Papers				
Electives	Paper Name	Paper Code	Credit	L-T-P
DSE I	ECONOMETRICS	ECO11504	4	3-1-0
	STATISTICAL QUALITY CONTROL	SDS11086	4	3-1-0
	SOFT COMPUTING	MTH11038	4	3-1-0
	DESIGN AND ANALYSIS OF ALGORITHM	CSE11659	4	3-1-0
DSE II	DEMOGRAPHY AND SURVIVAL ANALYSIS	SDS11087	4	3-1-0
	INTRODUCTION TO BIG DATA	CSE11652	4	3-1-0
	INTRODUCTION TO FINANCIAL RISK ANALYTICS	SDS11088	4	3-1-0
	ACTUARIAL STATISTICS	SDS11037	4	3-1-0
DSE III	INTRODUCTION TO DEEP LEARNING	CSE11653	4	3-1-0
	INTRODUCTION TO DEEP LEARNING PRACTICAL	CSE12654	2	0-0-3
	DATA MANIPULATION AND DATA CLEANING IN R	SDS11030	4	3-1-0
	DATA MANIPULATION AND DATA CLEANING IN R PRACTICAL	SDS12031	2	0-0-3
	SURVEY SAMPLING	SDS11089	4	3-1-0
	SURVEY SAMPLING PRACTICAL	SDS12090	2	0-0-3
	INTRODUCTION TO NUMERICAL ANALYSIS	MTH11017	4	3-1-0
	NUMERICAL ANALYSIS LAB	MTH12019	2	0-0-3