

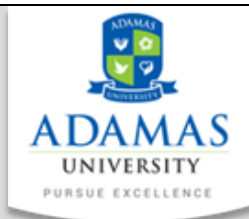


ADAMAS UNIVERSITY
SCHOOL OF BASIC AND APPLIED
SCIENCES

DEPARTMENT OF MATHEMATICS

B.SC. (HONS) MATHEMATICS
PROGRAMME
COURSE STRUCTURE

ACADEMIC YEAR: 2022-23



SCHOOL OF BASIC AND APPLIED SCIENCES

B.Sc. (Hons) Mathematics

SEMESTER I

SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS
				L	T	P	C	
1	CORE	MTH11082	CLASSICAL ALGEBRA	3	1	0	4	
2	CORE	MTH11083	REAL ANALYSIS I	3	1	0	4	
3	CORE	MTH11084	CALCULUS I	3	1	0	4	
4	FOUNDATION	ENG11057	ENGLISH LANGUAGE AND LITERATURE	2	0	0	2	
5	GEN. ELECTIVE		ELECTIVE (THEORY)	3	1	0	4	
6	GEN. ELECTIVE		ELECTIVE (PRACTICAL)	0	0	3	2	
7	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 LAB I (CHM12152)]

SEMESTER II

SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS
				L	T	P	C	
8	CORE	MTH11085	DIFFERENTIAL EQUATION I	3	1	0	4	
9	CORE	MTH11086	MODERN ALGEBRA I	3	1	0	4	
10	CORE	MTH11087	REAL ANALYSIS II	3	1	0	4	
11	CORE	MTH11091	ANALYTICAL GEOMETRY 2D	3	1	0	4	
12	FOUNDATION	EVS11105	ENVIRONMENTAL SCIENCE	2	0	0	2	
13	GEN. ELECTIVE		ELECTIVE (THEORY)	3	1	0	4	
14	GEN. ELECTIVE		ELECTIVE (PRACTICAL)	0	0	3	2	
15	VALUE ADDED COURSES	EIC11001	VENTURE IDEATION	2	0	0	2	
TOTAL CREDIT							26	

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

SEMESTER III

SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS
				L	T	P	C	
16	CORE	MTH11009	LINEAR ALGEBRA I	3	1	0	4	
17	CORE	MTH11089	MODERN ALGEBRA II	3	1	0	4	
18	CORE	MTH11090	DIFFERENTIAL EQUATION II	3	1	0	4	
19	SKILL ENHANCEMENT COURSE (SEC)	MTH13015	R PROGRAMMING	1	0	3	3	
20	GEN. ELECTIVE		ELECTIVE (THEORY)	3	1	0	4	
21	GEN. ELECTIVE		ELECTIVE (PRACTICAL)	0	0	3	2	
22	VALUE ADDED COURSES	SOC14100	COMMUNITY SERVICE	0	0	1	1	
23	VALUE ADDED COURSES	IDP14001	INTER-DISCIPLINARY PROJECT	0	0	3	3	
			TOTAL CREDIT				25	

[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)

SEMESTER IV

SL. No.	TYPE OF COURSE	COURSE CODE	TITLE OF THE COURSE	CONTACT HOURS PER WEEK				REMARKS
				L	T	P	C	
24	CORE	MTH11092	CALCULUS II	3	1	0	4	
25	CORE	MTH11012	LINEAR ALGEBRA II	3	1	0	4	
26	CORE	SDS11069	THEORY OF PROBABILITY	3	1	0	4	
27	CORE	MTH11094	ANALYTICAL GEOMETRY 3D	3	1	0	4	
28	SKILL ENHANCEMENT COURSE (SEC)	MTH13011	INTRODUCTION TO MATLAB	1	0	3	3	
29	GEN. ELECTIVE		ELECTIVE (THEORY)	3	1	0	4	
30	GEN. ELECTIVE		ELECTIVE (PRACTICAL)	0	0	3	2	
31	VALUE ADDED COURSES	PSG11021	HUMAN VALUES AND PROFESSIONAL ETHICS	2	0	0	2	
			TOTAL CREDIT				27	

[OPTIONS: MACROECONOMICS (ECO11031)*, ELECTIVE PHYSICS II (PHY11024) & ELECTIVE PHYSICS LAB II (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	
32	CORE	MTH11016	FUNCTIONS OF COMPLEX VARIABLES	3	1	0	4	
33	CORE	MTH11021	INTRODUCTION TO LINEAR PROGRAMMING AND GAME THEORY	3	1	0	4	
34	CORE	MTH11017	INTRODUCTION TO NUMERICAL ANALYSIS	3	1	0	4	
35	CORE	MTH12019	INTRODUCTION TO NUMERICAL ANALYSIS LAB	0	0	3	2	
36	CORE	SDS11070	STATISTICS	3	1	0	4	
37	CORE	MTH11018	VECTOR ANALYSIS AND TENSOR CALCULUS	3	1	0	4	
38	ELECTIVE	-	DSE I	3	1	0	4	
39		MTH14020	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	
40	CORE	MTH11022	INTEGRAL TRANSFORMS	3	1	0	4	
41	CORE	MTH11095	ELEMENTARY DYNAMICS	3	1	0	4	
42	ELECTIVE	-	DSE II	3	1	0	4	
43	ELECTIVE	-	DSE III	3	1	0	4	
44		MTH15096	DISSERTATION	0	0	12	10	
			TOTAL CREDIT				26	
			TOTAL (REQUIRED CREDIT)	22+22+29+27+28+26=154				

Discipline Specific Electives (DSE):

Students are required to study **THREE** elective Papers from the Major/ Hons discipline during semester V and VI. The list of the electives is given below.

DSE I		DSE II	
ANALYTICAL STATICS & HYDROSTATICS	MTH11097	NUMBER THOERY	MTH11027
MATHEMATICAL MODELLING	MTH11029	METRIC SPACE AND TOPOLOGY	MTH11099
NUMERICAL METHODS FOR ORDINARY DIFFERENTIAL EQUATIONS	MTH11098	NON-NEGATIVE MATRICES	MTH11100
ELEMENTARY DATA SCIENCE AND VISUALIZATION	SDS11082	GRAPH THEORY	MTH11101
DSE III			
INTRODUCTION TO STOCHASTIC PROCESS	SDS11092	INTRODUCTION TO PORTFOLIO OPTIMIZATION	MTH11104
INTRODUCTION TO OPTIMIZATION	MTH11102	INTRODUCTION TO FINANCIAL RISK ANALYTICS	SDS11088