BS Data Science			
Summer 2025			

Semester 1

Course Code	Course Title	Credit Hours	Sections
CP103	Introduction to Computing		
CP101	Introduction to Computing – Lab		
GE102	Basic Electronics		
GE101	Basic Electronics – Lab		
ENG110	Functional English		
PAK102	Ideology and Constitution of Pakistan		
AL143	Discrete Structures		
Only for Pre-Med Students			
MAT103	Pre-Calculus (Only medical background)		N/A

Semester 2

Course Code	Course Title	Credit Hours	Sections
CP113	Programming Fundamentals	3	1
CP111	Programming Fundamentals - Lab	1	1
AR102	Digital Logic Design	2	1
AR101	Digital Logic Design - Lab	1	1
MAT113	Calculus and Analytic Geometry	3	1
ENG211	Expository Writing	3	1
CCE201	Civics and Community Engagement	2	1
MAT123	Elementary Algebra (For Pre-Medical Students Only)	3	1
DSMG1933	Introduction to Business	3	1

Course Code	Course Title	Credit Hours	Sections

	Course Code	Course Title	Credit Hours	Sections
Semester 3	DSCP2033	Object Oriented Programming	3	1
	DSCP2031	Object Oriented Programming-LAB	1	1
	DSCS2543	Computer Organization and Assembly Language	3	1
	DSCS2541	Computer Organization and Assembly Language-LAB	1	1
	DSDS1112	Fundamentals of Data Science	2	1
	DSDS1111	Fundamentals of Data Science- Lab	1	1
	ISL201	Islamic Studies	2	1
Semester 4	**Course Code**	**Course Title**	**Credit Hours**	**Sections**
	DSSS2863	Probability and Statistics	3	1
	DSCP2043	Data Structures and Algorithms	3	1
	DSCP2041	Data Structures and Algorithms – Lab	1	1
	DSDB2313	Introduction to Database Systems	3	1
	DSDB2311	Introduction to Database Systems - Lab	1	1
	DSSS2873	Linear Algebra	3	1
	ENG203	Technical & Business Writing	3	1
Semester 5	**Course Code**	**Course Title**	**Credit Hours**	**Sections**
	DSNS3413	Operating Systems	3	1
	DSNS3411	Operating Systems-LAB	1	1
	DSSD3213	Software Engineering	3	1
	DSAL3523	Design and Analysis of Algorithm	3	1
	DSSS2853	Applied Statistics	3	1
	DSDS2143	Tools and Techniques for Data Science	3	1

Course Code	Course Title	Credit Hours	Sections
DSAL3253	Theory of Automata	3	1
DSAL3533	Artificial Intelligence	3	1
DSAL3531	Artificial Intelligence – Lab	1	1
DSNS3423	Computer Communication and Networks	3	1
DSNS3421	Computer Communication and Networks – Lab	1	1
DSDB3343	Information Retrieval	3	1
DSDS4473	Big Data Analytics	3	1
DSDS4471	Big Data Analytics-Lab	1	1

Semester 6

Course Code	Course Title	Credit Hours	Sections
DSDB3332	Data Mining	2	1
DSDB3331	Data Mining – Lab	1	1
DSNS4433	Information Security	3	1
DSAL4583	Introduction to Machine Learning	3	1
DSDS3162	Exploratory Data Analysis & Visualization	2	1
DSDS3161	Exploratory Data Analysis & Visualization	1	1

Semester 7

Course Code	Course Title	Credit Hours	Sections
DSNS3482	Parallel and Distributed Computing	2	1
DSNS3481	Parallel and Distributed Computing - Lab	1	1
DSGE4753	Professional Practices	3	1
DSDS4152	Data Warehousing and Business Intelligence	2	1
DSDS4151	Data Warehousing and Business Intelligence - Lab	1	1

Semester 8