

BS Computational Statistics and Data Analytics			
Course Title	Course Code	Course Type	Credit Hour
Semester 1			
GEN(NS)		General	3
Functional English	GENG-101	General	3
Civics and Community Engagement	GCCE-101	General	2
Islamic Studies / Ethics (for Non-Muslims)	GISL-101 / GETH-101	General	2
Introduction to Statistics	CSTA-101	Major	3
Calculus	SMTH-101	Major	3
Tarjuma-e-Quran	HQ-001	Compulsory	0
Total Credit Hours			16
Semester 2			
GEN(AH)		General	2
Quantitative Reasoning (I)	GQR-101	General	3
Entrepreneurship	GENT-101	General	2
Ideology and Constitution of Pakistan	GICP-101	General	2
Linear Algebra	SMTH-102	Major	3
Probability Theory and Distributions	CSTA-102	Major	3
Tarjuma-e-Quran	HQ-002	Compulsory	1
Total Credit Hours			16
Semester 3			
Applications of Information and Communication Technologies	GICT-201	General	3
Expository Writing	GENG-201	General	3
Statistical Computing	STAT-205	Major	3
Inferential Statistics	CSTA-202	Major	3
Applied Regression Analysis	CSTA-201	Major	3
Tarjuma-e-Quran	HQ-003	Compulsory	0
Total Credit Hours			15
Semester 4			
GEN(SS)		General	2
Quantitative Reasoning (II)	GQR-202	General	3
Programming with R	STAT-203	Major	3
Introduction to Programming	CSTA-204	Major	3
Applied Time Series Analysis	CSTA-203	Major	3
Tarjuma-e-Quran	HQ-004	Compulsory	1
Total Credit Hours			15
Semester 5			
Interdisciplinary		Interdisciplinary	3
Interdisciplinary		Interdisciplinary	3
Distribution Theory	CSTA-303	Major	3
Programming with Python	CSTA-302	Major	3
Multivariate Analysis	STAT-305	Major	3
Tarjuma-e-Quran	HQ-005	Compulsory	0
Total Credit Hours			15
Semester 6			
Interdisciplinary		Interdisciplinary	3
Interdisciplinary		Interdisciplinary	3
Image Analysis	CSTA-306	Major	3
Bayesian Analysis	CSTA-305	Major	3
Machine Learning	CSTA-304	Major	3
Tarjuma-e-Quran	HQ-006	Compulsory	1
Total Credit Hours			16
Semester 7			
Fieldwork	CSTA-401	Major	3
Elective-I		Major	3
Research Methods	STAT-404	Major	3
Artificial Intelligence (AI)	CSTA-403	Major	3
Industrial Statistics	CSTA-402	Major	3
Tarjuma-e-Quran	HQ-007	Compulsory	0
Elective-II		Major	3
Total Credit Hours			18
Semester 8			
Capstone Project	CSTA-405	Major	3
Elective-III		Major	3
Natural Language Processing	CSTA-408	Major	3
Spatial Analysis	CSTA-407	Major	3
Big Data Analysis	CSTA-406	Major	3
Tarjuma-e-Quran	HQ-008	Compulsory	1
Elective-IV		Major	3
Total Credit Hours			19
Signature			